ARKANSAS STATE HIGHWAY COMMISSION

PROPOSAL DOCUMENTS OF

FOR THE CONSTRUCTION OF

STATE JOB NO. **080457**

FEDERAL AID PROJECT CMF-STPU-0023(44)

UPRR OVERPASS & REALIGN. (MAYFLOWER) (S)

STATE HIGHWAY **89** SECTION **4 & 5**

IN **FAULKNER** COUNTY

Bound herein are the Supplemental Specifications, Special Provisions, Proposal Documents and Schedule of Items applicable to this proposed construction contract.

Applicable to this proposed construction contract, but not bound herein, are the Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 2014, and the Construction Plans.

CAUTION TO BIDDERS

Please review Section 102 of the Standard Specifictions, 2014 Edition for Bidding Requirements and Conditions. Mistakes or omissions can be costly. Important items for you to check are included in, but not limited to, those listed below. This checklist is furnished only to assist you in submitting a proper bid. Check as you read.

- ☐ Have you acknowledged all Addenda by email or fax?
- ☐ Is the unit price entered appropriate for the item?
- ☐ Have you entered a unit price for each bid item except in the case of authorized alternate pay items? (A zero bid ($0.00) is a valid price and will be considered.)
- ☐ Have you checked the Schedule of Items for various pay items that may have a minimum or maximum unit bid price? (Refer to the Standard Specifications for further information concerning these items)
  - ✓ Asphalt Binder
  - ✓ Relocating Precast Concrete Barrier
  - ✓ Water
  - ✓ Mobilization
- ☐ Have you limited your bid for Mobilization to five percent (5%) of the subtotal?
- ☐ For Federal-aid projects, did you complete the Certification for Federal aid Contracts?
- ☐ Prior to submitting your bid, did you check for error messages, and are all the folders "green"?
- ☐ If submitting a paper copy of the Proposal Guaranty (Bid Bond) is it signed by an officer of your company **AND** the Surety Agent?
- ☐ Did you ensure your Proposal Guaranty (if you are submitting a paper bond) will arrive prior to the time and date stated on Page 2 of the Proposal Documents?

1-17-08
Revised: 6-1-09
Revised: 2-15-12
Revised: 1-15-15
Revised: 5-26-16
Revised: 11-17-17

ARKANSAS DEPARTMENT OF TRANSPORTATION

NOTICE OF NONDISCRIMINATION

The Arkansas Department of Transportation (Department) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the Department does not discriminate on the basis of race, sex, color, age, national origin, religion (not applicable as a protected group under the Federal Motor Carrier Safety Administration Title VI Program), disability, Limited English Proficiency (LEP), or low-income status in the admission, access to and treatment in the Department's programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to Joanna P. McFadden Section Head – EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501)569- 2298, (Voice/TTY 711), or the following email address: joanna.mcfadden@ardot.gov

Free language assistance for Limited English Proficient individuals is available upon request.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

TITLE VI CONTRACT PROVISIONS
APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) Withholding of payments to the contractor under the contract until the contractor complies, and/or

(b) Cancelling, terminating or suspending a contract, in whole or in part.

(6) Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

TITLE VI CONTRACT PROVISIONS
APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non- discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);

- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;

- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

- Titles II and Ill of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;

- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681et seq).

Arkansas Department of Transportation
Supplemental Specifications and Special Provisions Listing
State Job Number 080457

The following supplemental specifications and special provisions for this project supplement the standard specifications, edition of 2014. In case of conflict, the supplemental specifications and special provisions shall govern.

ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
FHWA-1273	SUPPLEMENT - TRAINING PROGRAM - JOB 080457
JOB SP	CARGO PREFERENCE ACT REQUIREMENTS
JOB SP	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB SP	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB SP	BIDDING REQUIREMENTS AND CONDITIONS
JOB SP	MANDATORY ELECTRONIC CONTRACT
JOB SP	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB SP	ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC
JOB SP	FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT
JOB SP	CLEARING AND GRUBBING
JOB SP	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB SP	RUMBLE STRIP REMOVAL
JOB SP	NESTING SITES OF MIGRATORY BIRDS
JOB SP	EXCAVATION
JOB SP	SOIL STABILIZATION
JOB SP	RESTRICTIONS ON THE USE OF RECYCLED ASPHALT PAVEMENT MATERIAL
JOB SP	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB SP	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB SP	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)
JOB SP	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB SP	WARM MIX ASPHALT
JOB SP	CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB SP	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB SP	MAINTENANCE OF TRAFFIC
JOB SP	SPECIAL SAFETY REQUIREMENTS FOR OVERHEAD SIGNS
JOB SP	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB SP	CONSTRUCTION PROJECT INFORMATION SIGN
JOB SP	PIPE CULVERTS

The following supplemental specifications and special provisions for this project supplement the standard specifications, edition of 2014. In case of conflict, the supplemental specifications and special provisions shall govern.

JOB SP	PLASTIC PIPE
JOB SP	METAL PIPE
JOB SP	EXTENSION FOR PIPE CULVERTS
JOB SP	CONCRETE WALKS (TYPE SPECIAL)
JOB SP	ACTUATED CONTROLLER
JOB SP	CABINET DRAWER ASSEMBLY
JOB SP	PORTABLE TRAFFIC SIGNAL SYSTEM
JOB SP	ANTENNA SUPPORT
JOB SP	LOCAL RADIO WITH ANTENNA RELOCATION
JOB SP	SYSTEM LOCAL CONTROLLER
JOB SP	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB SP	RETROREFLECTIVE BACKPLATES
JOB SP	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB SP	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB SP	LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)
JOB SP	LED TRAFFIC SIGNAL HEAD
JOB SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB SP	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB SP	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)
JOB SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING
JOB SP	GENERAL REQUIREMENTS FOR SIGNS
JOB SP	RELOCATION OF EXISTING OVERHEAD SIGN STRUCTURES
JOB SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB SP	EDGE CARD VIDEO PROCESSOR
JOB SP	VIDEO DETECTOR ROTATION
JOB SP	VIDEO DETECTOR (COLOR)
JOB SP	ARCHITECTURAL FINISH
JOB SP	TEXTURED COATING FINISH
JOB SP	RETAINING WALLS
JOB SP	ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)
JOB SP	TEXTURED COATING FINISH (CAST-IN PLACE RETAINING WALLS)
JOB SP	DRILLED SHAFT FOUNDATIONS
JOB SP	NONDESTRUCTIVE TESTING OF DRILLED SHAFTS
JOB SP	EXPLORATORY HOLES
JOB SP	DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB SP	SPECIAL SAFETY REQUIREMENTS FOR BRIDGES

The following supplemental specifications and special provisions for this project supplement the standard specifications, edition of 2014. In case of conflict, the supplemental specifications and special provisions shall govern.

JOB SP	SHORING FOR CULVERTS
JOB SP	PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB SP	AIRPORT CLEARANCE REQUIREMENTS
JOB SP	ANIMAL PASSAGE SHELVES FOR WILDLIFE CROSSINGS
JOB SP	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB SP	INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)
JOB SP	PARTNERING REQUIREMENTS
JOB SP	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB SP	STORM WATER POLLUTION PREVENTION PLAN
JOB SP	SEQUENCE OF CONSTRUCTION
JOB SP	VALUE ENGINEERING
JOB SP	UTILITY ADJUSTMENTS
SP 108-1	LIQUIDATED DAMAGES
SS 100-3	CONTRACTOR'S LICENSE
SS 100-4	DEPARTMENT NAME CHANGE
SS 102-2	ISSUANCE OF PROPOSALS
SS 108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
SS 110-1	PROTECTION OF WATER QUALITY AND WETLANDS
SS 210-1	UNCLASSIFIED EXCAVATION
SS 303-1	AGGREGATE BASE COURSE
SS 306-1	QUALITY CONTROL AND ACCEPTANCE
SS 400-1	TACK COATS
SS 400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
SS 400-5	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
SS 400-6	LIQUID ANTI-STRIP ADDITIVE
SS 404-3	DESIGN OF ASPHALT MIXTURES
SS 410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
SS 410-2	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
SS 505-1	PORTLAND CEMENT CONCRETE DRIVEWAY
SS 600-2	INCIDENTAL CONSTRUCTION
SS 603-1	LANE CLOSURE NOTIFICATION
SS 604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
SS 604-3	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
SS 605-1	CONCRETE DITCH PAVING
SS 606-1	PIPE CULVERTS FOR SIDE DRAINS

The following supplemental specifications and special provisions for this project supplement the standard specifications, edition of 2014. In case of conflict, the supplemental specifications and special provisions shall govern.

SS 617-1	GUARDRAIL TERMINAL (TYPE 2)
SS 620-1	MULCH COVER
SS 621-1	FILTER SOCKS
SS 632-1	CONCRETE ISLAND
SS 633-1	CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
SS 634-1	CURBING
SS 700-2	TRAFFIC CONTROL FACILITIES
SS 723-1	GENERAL REQUIREMENTS FOR SIGNS
SS 800-1	STRUCTURES
SS 802-3	CONCRETE FOR STRUCTURES
SS 804-2	REINFORCING STEEL FOR STRUCTURES
SS 807-2	STEEL STRUCTURES
SS 808-1	INSTALLATION OF ELASTOMERIC BEARINGS
SS 808-2	ELASTOMERIC BEARINGS

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS

Errors noted in the printed book of Standard Specifications for Highway Construction, Edition of 2014, are listed below and this publication is hereby revised as follows:

Page 124: The third sentence of the first paragraph of Subsection 110.03(c) should read: The Engineer will make a decision within 10 business days concerning the necessity or practicability of the request.

Page 195: The sixth paragraph of subsection 303.02 should read: For Classes 1 through 8 materials, the fraction passing the #200 (0.075 mm) sieve shall not be greater than three-fourths of the fraction passing the #40 (0.0425 mm) sieve. For Classes 3 through 8, the fraction passing the #40 (0.425 mm) sieve shall have a liquid limit not greater than 25.

Page 363: In the second paragraph of Subsection 502.02, the reference to ASTM 775 should be replaced by “ASTM A 775”.

Page 636: In the second paragraph of Subsection 730.02, the references to AASHTO M 183 should be replaced with ASTM A36.

Page 637: The last sentence of the second paragraph of Subsection 730.03 should read: All bolts, nuts, and washers shall be galvanized according to AASHTO M 232 or ASTM B 695, Class 40 or 50.

Page 767: In the fourth paragraph of Subsection 807.06(a), the reference to ASTM B595 should be replaced by “ASTM B695”.

Page 841: Subsection 817.04(a) should read: The treatment of lumber and timber shall meet the applicable requirements of the current edition of the AWPA, Standards U1, Commodity Specification E, Use Category UC4C.

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS

Elsewhere in this contract are three Supplemental Specifications on Equal Employment Opportunity designated as PR-1273 Supplements. They are (1)Specific Equal Employment Opportunity Responsibilities (23 U.S.C. 140), (2) Equal Employment Opportunity – Goals and Timetables, and (3) Equal Employment Opportunity - Federal Standards. This notice is to clarify the responsibilities for review of compliance and enforcement for these separate supplemental specification requirements.

The first of the Supplemental Specifications cited above covers the requirements for the equal employment opportunity program under Title 23 for which the Arkansas Department of Transportation (ARDOT) is responsible. The ARDOT performs the necessary compliance review and enforcement of this Supplemental Specification which is applicable to all contractors holding Federal-aid highway contracts.

The latter two Supplemental Specifications are for the specific equal opportunity requirements for Executive Order 11246 which is the sole responsibility of the Office of Federal Contract Compliance Programs (OFCCP), Department of Labor. Review and enforcement under these Supplemental Specifications is performed by OFCCP.

OFCCP has, under Paragraph 8 of the EEO Federal Standards Supplemental Specification, recognized the Arkansas AGC Heavy Highway Affirmative Action Plan as meeting the provisions of that Supplemental Specification and Supplemental Specification (2)cited above. With this recognition, those contractors signatory to the AGC Plan have been waived from individual review by OFCCP. However, OFCCP retains the right to review any such contractors whenever circumstances warrant. Also, contractors non-signatory to the AGC Plan are subject to OFCCP review under EO 11246.

ARDOT and OFCCP have agreed to work towards eliminating duplicative reviews on individual contractors; however, each agency may make reviews at any time notwithstanding the cited agreement.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)

1. General.

a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form FHWA-1273 and Supplements) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions. The initial measure of the contractor's good faith efforts to comply with these Special Provisions shall be its efforts to meet the goals set forth in the "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)" for minority and female participation expressed in percentage terms for the contractor's work force in each trade on this project.

b. The contractor will work with the Department and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

c. The contractor and all his/her subcontractors holding subcontracts not including material suppliers, of $10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The contractor will include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy.

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, age, disability, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex. age, disability, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

3. Equal Employment Opportunity Officer.

The contractor will designate and make known to the Department contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy.

a. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

(1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

(3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority and female employees.

b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

(1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment, and potential employees.

(2) The contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment.

a. When advertising for employees, the contractor will include in all advertisements for employees the notation: •An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges, and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority and female applicants will be discussed with employees.

6. Personnel Actions.

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, age, disability, or national origin. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimina- tion may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

7. Training and Promotion.

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the Optional Training Special Provision is provided under this contract, this subparagraph will be superseded by that Special Provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. Unions.

If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, age, disability, or national origin.

c. The contractor is to obtain information as to the referral practices and policies of the labor union, except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the State Highway Department and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, age, disability, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the Department.

9. Subcontracting.

a. The contractor's attention is called to the Special Provision on Disadvantaged Business Enterprises in Federal-Aid Highway Construction.

b. The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports.

a. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

(1) the number of minority and non-minority group members and women employed in each work classification on the project,

(2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force),

(3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and

(4) the progress and efforts being made in securing the services of Disadvantaged Business Enterprises or subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department and the Federal Highway Administration.

c. The contractors will submit an annual report to the State Highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR 1391.

11. Corrective Action Plans.

The contractor understands that a designated representative of the Department will periodically review compliance by the contractor with all contractual provisions incorporated pursuant to Executive Order 11246, as amended, and Federal Highway Administration Equal Employment Opportunity Special Provisions implementing the Federal-Aid Highway Act of 1968, where applicable.

In the event that the designated representative of the Department finds that the contractor has failed to comply with any of the aforementioned contractual provisions, he will notify the contractor of this finding in writing. A declaration of default will result in the suspension of all future payments. No declaration of default will be made if the Department and the contractor formally agree to enter into a corrective action plan setting out the specified steps and timetables the contractor will be contractually obligated to perform in order to re-establish his compliance. This corrective action plan, in order to be accepted by the Department, shall include the following mandatory enforcement language:

"If, at any time in the future, the Office of Federal Contract Compliance Programs or the Federal Highway Administration or the Arkansas State Highway Commission or their successor(s) believe that (name of contractor) has violated any portion of this agreement, (name of contractor) shall be promptly notified of the fact in writing. This notification shall include a statement of the facts and circumstances relied upon in forming that belief. In addition, the notification shall provide (name of contractor) with 15 days to respond in writing to the notification except where the Office of Federal Contract Compliance Programs, the Federal Highway Administration or the Arkansas State Highway Commission alleges that such delay would result in irreparable injury. It is understood that enforcement proceedings for violation of this agreement may be initiated at any time after the 15-day period has elapsed (or sooner if irreparable injury is alleged) without issuance of a show cause notice."

"It is recognized that where the Office of Federal Contract Compliance Programs and/or the Federal Highway Administration and/or the Arkansas State Highway Commission believes that (name of contractor) has breached this agreement, evidence regarding the entire scope of (name of contractor) alleged noncompliance from which this agreement resulted, in addition to evidence regarding (name of contractor) alleged violation of this agreement, may be introduced at the enforcement proceeding."

"Violation of this agreement may subject (name of contractor) to sanctions pursuant to the Arkansas State Highway Commission contract administration procedures. It is further recognized that liability for violation of this agreement may also subject (name of contractor) to sanctions set forth in Section 209 of Executive Order 11246, as amended, and/or appropriate relief."

The contractor will submit quarterly reports to the Department as a result of any deficiencies cited during an equal employment opportunity compliance review. The reports will indicate the affirmative action steps taken to correct the deficiencies. Instructions for submission of the reports will be furnished by the Equal Employment Opportunity Section.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

MINORITIES

COUNTY

Arkansas	16.4%	Lee	26.5%
Ashley	16.4%	Lincoln	16.4%
Baxter	3.3%	Little River	19.7%
Benton	3.3%	Logan	6.6%
Boone	3.3%	Lonoke	16.4%
Bradley	16.4%	Madison	3.3%
Calhoun	16.4%	Marion	3.3%
Carroll	3.3%	Miller	19.7%
Chicot	16.4%	Mississippi	26.5%
Clark	16.4%	Monroe	16.4%
Clay	26.5%	Montgomery	16.4%
Cleburne	16.4%	Nevada	20.2%
Cleveland	16.4%	Newton	3.3%
Columbia	20.2%	Ouachita	16.4%
Conway	16.4%	Perry	16.4%
Craighead	26.5%	Phillips	26.5%
Crawford	5.6%	Pike	20.2%
Crittenden	32.3%	Poinsett	26.5%
Cross	26.5%	Polk	6.6%
Dallas	16.4%	Pope	16.4%
Desha	16.4%	Prairie	16.4%
Drew	16.4%	Pulaski	15.7%
Faulkner	16.4%	Randolph	26.5%
Franklin	6.6%	Saline	15.7%
Fulton	16.4%	Scott	6.6%
Garland	16.4%	Searcy	3.3%
Grant	16.4%	Sebastian	5.6%
Greene	26.5%	Sevier	20.2%
Hempstead	20.2%	Sharp	16.4%
Hot Spring	16.4%	Stone	16.4%
Howard	20.2%	St. Francis	26.5%
Independence	16.4%	Union	16.4%
Izard	16.4%	Van Buren	16.4%
Jackson	16.4%	Washington	3.3%
Jefferson	31.2%	White	16.4%
Johnson	16.4%	Woodruff	16.4%
Lafayette	20.2%	Yell	16.4%
Lawrence	26.5%		

FEMALES

Statewide - 6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is as described in the Proposal Form for this report.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

1. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

1v. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CPR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The

Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees before the start of work and then not less often than once every six months; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site and then not less often than once every six months. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screening procedures, and test to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between sexes.

o. Document and maintain a record of all solicitations of offers for subcontractors for disadvantaged business

enterprise construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, national origin, age or disability.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Employment Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41CFR60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. In addition to the reporting requirements set forth elsewhere in this contract, the contractor and the subcontractors holding subcontracts not including material suppliers, of $10,000 or more, shall submit for every month of July during which work is performed employment data as contained under Form PR-1391 (Appendix C to 23 CFR, Part 230), and in accordance with the instructions included thereon.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

	POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
1.	Equal Employment Opportunity is the Law	U.S. Department of Labor (OFCCP)	ARDOT Resident Engineer
2.	"EEO is the Law" Poster Supplement	U.S. Department of Labor (OFCCP)	ARDOT Resident Engineer
3.	Company EEO Policy (prepared by the Contractor on the Company's letterhead)	U. S. Department of Labor (OFCCP) *Union Contractors Only	Contractor to Prepare: a. EEO policy statement. b. Notice encouraging employees to refer minority and female applicants for employment. c. Notice informing employees of an available training program and the entrance requirements. d. Complaint procedures. e. Notice identifying company EEO officer by name, including address and telephone number where EEO officer can be located. f. Work environment statement. g. Certification of nonsegregated facilities. *h. Notice to unions disseminating EEO commitments and responsibilities and requesting their cooperation.
4.	Current Wage Rates (PR-1273 Supplement) or SS Revisions of PR-1273 for Off-System Projects	U. S. Department of Labor	Contained in contract. Extra copies may be obtained from Program Management - ARDOT Resident Engineer

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

	POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
5.	"Employee Rights Under the Davis-Bacon Act" (WH 1321)	U. S. Department of Labor	ARDOT Resident Engineer
6.	"Employee Rights Under the Davis-Bacon Act" (WH 1321 SPA)	U. S. Department of Labor	ARDOT Resident Engineer
7.	Minimum Wage Rate (WH 1088)	U. S. Department of Labor	ARDOT Resident Engineer
8.	"NOTICE" Federal Aid Projects (PR-1022)	U. S. Department of Transportation (FHWA)	ARDOT Resident Engineer
9.	Job Safety and Health Protection OSHA 3165	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
10.	Job Safety and Health Protection OSHA 3167	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
11.	Emergency Phone Numbers of Doctors, Hospital and Ambulance near Job Site for referring injured employees.	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
12.	WCC Form AR-P Workers Compensation Notice and Instructions to Employers and Employees	State of Arkansas	Insurance Carrier
	Self-Insurer	State of Arkansas	Administrator - Self-Insured Group

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

	POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
13.	Log and Summary of Occupational Injuries and Illnesses (OSHA Form 300). The Summary portion must be posted from February 1 to April 30, of the year following the year covered by the form.	U. S. Department of Labor (OSHA) Public Law 91-596	ARDOT Resident Engineer
14.	Family and Medical Leave Act of 1993 (WH-1420) Employers who employ 50 or more employees for at least 20 workweeks in the current or preceding calendar year.	U. S. Department of Labor	ARDOT Resident Engineer
15.	Employee Polygraph Protection Act (WH-1462)	U. S. Department of Labor	ARDOT Resident Engineer
16.	Your Rights Under USERRA (The Uniformed Services Employment and Reemployment Rights Act)	U. S. Department of Labor	ARDOT Resident Engineer
17.	Arkansas Department of Labor Notice to Employer & Employee	Arkansas Department of Labor	ARDOT Resident Engineer
18.	Pay Transparency Nondiscrimination Provision	U. S. Department of Labor (OFCCP)	ARDOT Resident Engineer

"General Decision Number: AR20200163 05/01/2020

Superseded General Decision Number: AR20190163

State: Arkansas

Construction Type: Highway

County: Faulkner County in Arkansas.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	05/01/2020

* SUAR2014-035 07/21/2014

	Rates	Fringes
CARPENTER, Includes Form Work....	$ 14.09	0.00
CEMENT MASON/CONCRETE FINISHER...	$ 16.01	0.00
FENCE ERECTOR.....	$ 12.69	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	$ 13.25	0.00
HIGHWAY/PARKING LOT STRIPING: Painter.....	$ 21.75	0.00
IRONWORKER, REINFORCING.....	$ 14.22	0.00
IRONWORKER, STRUCTURAL.....	$ 15.36	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	$ 14.45	0.00
LABORER: Common or General.....	$ 12.57	0.00

LABORER: Mason Tender -
Cement/Concrete.....$ 15.23 0.00

LABORER: Pipelayer.....$ 14.33 0.00

OPERATOR: Asphalt Spreader.....$ 15.80 0.00

OPERATOR:
Backhoe/Excavator/Trackhoe.....$ 17.81 0.00

OPERATOR: Bobcat/Skid
Steer/Skid Loader.....$ 16.06 0.00

OPERATOR: Broom/Sweeper.....$ 12.00 0.00

OPERATOR: Bulldozer.....$ 16.74 0.00

OPERATOR: Crane.....$ 20.63 0.00

OPERATOR: Distributor.....$ 14.52 0.00

OPERATOR: Drill.....$ 14.85 0.00

OPERATOR: Grade Checker.....$ 15.54 0.00

OPERATOR: Grader/Blade.....$ 20.04 0.00

OPERATOR: Hydroseeder.....$ 10.79 0.00

OPERATOR: Loader.....$ 17.05 0.00

OPERATOR: Mechanic.....$ 22.19 0.00

OPERATOR: Milling Machine.....$ 17.52 0.00

OPERATOR: Oiler.....$ 18.46 0.00

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete).....$ 17.99 0.00

OPERATOR: Post Driver
(Guardrail/Fences).....$ 16.97 0.00

OPERATOR: Roller.....$ 20.27 0.00

OPERATOR: Scraper.....$ 19.31 0.00

OPERATOR: Screed.....$ 15.01 0.00

TRAFFIC CONTROL: Flagger.....$ 12.67 0.00

TRAFFIC CONTROL:
Laborer-Cones/
Barricades/Barrels -
Setter/Mover/Sweeper.....$ 13.37 0.00

TRUCK DRIVER: Dump Truck.....$ 14.81 0.00

TRUCK DRIVER: Flatbed Truck.....$ 21.03 0.00

TRUCK DRIVER: Lowboy Truck.....$ 17.61 0.00

TRUCK DRIVER: Servicer.....$ 15.90 0.00

TRUCK DRIVER: Water Truck.....$ 14.73 0.00

TRUCK DRIVER: Semi/Trailer

Truck.....$ 12.50 0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and

the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request

review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 080457

TRAINING PROGRAM

This Special Provision supersedes subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities" and implements 23 USC 140(a).

The contractors shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of training slots to be trained under the special provision will be **5**. A training slot will consist of 520 to 1040 hours.

As part of the contractor's equal employment opportunity/affirmative action program, training shall be provided as follows:

Training and upgrading of minorities, females and disadvantaged individuals toward journey level status is the primary objective of this Special Provision. A “disadvantaged individual” is an individual that meets the criteria established by the Department of Health and Human Services Poverty Guidelines. Training in classifications such as clerk-typist, secretary, bookkeeper, fire fighter, office engineer, estimator, timekeeper, laborer, or flag person **shall not** be approved for participation under this Special Provision.

The goals for minority and female participation established in accordance with 41 CFR 60-4 and listed elsewhere in this contract in the FHWA-1273 Supplement titled "Equal Employment Opportunity Goals and Timetables" subtitled "Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)" apply to all training performed by the contractor in the covered area.

In the event that the contractor subcontracts a portion of the contract work, the contractor may not further assign a portion of the training requirements established herein without the consent of the subcontractor(s). Any assignment of these training requirements by the contractor shall be submitted in writing to the Department and an appropriately amended commitment form shall be made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The contractor shall submit to the Department’s Resident Engineer at the preconstruction conference a completed Training Commitment Form (TCF). Refer to Page four of four. The TCF should specify the training program, number of trainees, training classification, estimated starting date and training hours required per training classification to be used to fulfill the training requirement of this Special Provision. The Department must approve this form within 20 working days after the preconstruction conference. The contractor may enroll additional individuals in the training program based on approval of the Resident Engineer and there is sufficient time on the project or subsequent projects to complete the training.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 080457

TRAINING PROGRAM

If the contractor fails to submit the TCF at the preconstruction conference, work will not be allowed to start on the project until the TCF is submitted to the Resident Engineer.

Only training programs approved by the Department with FHWA concurrence, the Department of Labor, its agencies, or by a State Apprenticeship Agency or Council recognized by the U.S. Department of Labor may be used to fulfill training requirements under this Special Provision.

The contractor, upon the start of training under the contract, shall provide the Resident Engineer the following information for each trainee:

Name
Address
Telephone Number
Social Security Number
Race/Ethnic Origin
Gender
Training Classification
Training Starting Date
Classification(s) previously trained and date training was completed (if applicable)

The contractor shall furnish to the Resident Engineer the number of training hours the trainee has accumulated each month. A Trainee Termination Form shall be completed when a trainee terminates from the training program. The Resident Engineer shall receive a copy.

The contractor, prior to the start of training, shall provide written notice to each individual to be trained under this Special Provision of that individual's designation as a trainee, the training program and classification under which training will be provided, the length of the training program, and the hourly wage rate to be paid to the trainee. Each month, while enrolled in the training program, the contractor shall inform the trainee of the number of hours accumulated in the training program. Upon graduation, each trainee shall be issued a permanent certification designating the bearer as a graduate journey person of the appropriate training program.

No employee shall be employed as a trainee in any classification in which the employee has successfully completed a training course leading to journey level status or in which the employee has been employed at the journey level. Individuals may be trained a maximum of three times as long as the training is for the purpose of upgrading that individual. If the trainee is enrolled more than once on this project, the trainee will only count as one in satisfying the number that is required to be enrolled in this contract. The contractor shall satisfy this requirement by including appropriate questions in the employee application or by other suitable means. The contractor's findings in each case shall be documented.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 080457

TRAINING PROGRAM

Except as otherwise noted below, the contractor will be paid $2.00 per hour of training provided to minorities, women and disadvantaged individuals on this contract under an approved training program. As approved by the Department, payment will be made to the contractor for training persons in excess of the number of hours specified herein. This payment may be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other payment. Payment for off-site training may be made only if the approved training program being used by the contractor includes provisions for off-site training, the trainees are concurrently employed on a Federal-aid project, and the contractor contributes to the cost of the training, provides the instruction to the trainee, or pays the trainee's wage during the off-site training.

No payment will be made due to failure to provide the training required as stated in the approved training program and a good faith effort has not been made to retain the trainee upon completion of the training program, if work continues to be available in that classification. It is normally expected that a trainee will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in the work classification or until the trainee has completed the training program. It is desired that all trainees be on board for the entire length of the contract. Responsibilities will have been fulfilled under this Special Provision if acceptable training has been provided on the basis of the total number enrolled on the contract for a significant period or the contractor has made a good faith effort to fulfill its obligations.

Trainees will be paid at least 60 percent of the appropriate minimum journey level rate specified in the contract or no less than the common laborer rate for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Special Provision.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 080457

TRAINING PROGRAM

TRAINING COMMITMENT FORM

In accordance with this Training Special Provision, the undersigned bidder will provide training in the following crafts and in the amount of hours indicated below.

Training Program _____

Number of Trainees	Training Classification	Estimated Starting Date	Minimum Number of Training Hours Required Per Trainee
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

_____
Company Representative

_____
Title

_____
Date

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

CARGO PREFERENCE ACT REQUIREMENTS

The requirements of the Cargo Preference Act (CPA) and implementing regulations (46 CFR 381.7(a)-(b)) are applicable to this contract. For additional information, see the FHWA's web page:

https://www.fhwa.dot.gov/construction/cqit/cargo.cfm

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 080457

GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

A Disadvantaged Business Enterprise (DBE) goal of 9.0% has been established for this contract. Therefore, the provisions of subsection 103.08 of the Standard Specifications for Highway Construction, Edition of 2014, as revised, apply.

Requirements of Subsection 103.08 apply to successful bidders that are certified by the Department as a DBE. The Prime Contractor must meet the DBE goal. If the Prime Contractor is a Department certified DBE, then the work the Prime Contractor performs with its own forces, as well as work committed to be performed by DBE subcontractors and suppliers will count toward the goal. Therefore, DBE bidders should list work to be performed with its own forces on the DBE Participation form, along with DBE subcontractors to be utilized in achieving the goal.

All payments made to DBE Contractors, suppliers, manufacturers, and/or non-construction service firms must be reported by the Prime Contractor. This includes all payments made to DBE firms utilized in achieving the project goal and DBE firms that perform work that is not listed in the Disadvantaged Business Enterprise Participation form submitted with the executed Contract.

As required by Subsection 103.08(h), the Prime Contractor must use the appropriate DBE Payment Log form included in this Special Provision during the progress of the Contract. Listed below are the instructions on when each form is required to be submitted.

- The Prime DBE Payment Log (page 4) must be submitted by the Prime Contractor when he/she is a certified DBE Contractor and work was performed by their own forces or money was earned by the DBE Prime Contractor for work performed by a Subcontractor during the estimate period.
- The DBE Subcontractor Payment Log (page 3) must be submitted by the Prime Contractor when a Subcontractor is a certified DBE Contractor and work was performed by a Subcontractor or money was earned by a Subcontractor for work performed by a Second-tier Subcontractor during the estimate period.
- The 2nd Tier DBE Payment Log (page 5) must be submitted by the Prime Contractor when a 2nd Tier Subcontractor is a certified DBE Contractor and work was performed by a 2nd Tier Subcontractor during the estimate period.
- The 2nd Tier DBE Payment Log (page 5) must be submitted by the Prime Contractor when payments are made to a Department Certified DBE supplier, manufacturer, and/or non-construction service firm by the Prime Contractor or any Subcontractor or 2nd Tier Subcontractor during the estimate period.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 080457

GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

A separate DBE Payment Log form is required for each DBE firm receiving payments for work completed or services provided during each estimate period. The DBE Payment Log forms, along with instructions for their use, are available on the Department's website at:

http://ardot.gov/Construc/DBE_Log.xls

All certifications of payments must be received by the Resident Engineer within thirty-five (35) calendar days following the end of each estimate period. Facsimile or scanned copies of the completed original payment log forms are acceptable to fulfill this requirement.

Upon completion of the contract, a final certificate of payments to all DBE firms -- page 6 of this Special Provision -- is required by Subsection 103.08 (h). The final amount paid to each DBE firm shall match the total to date reported on the last DBE payment log submitted for each firm. If necessary, an additional DBE payment log shall be submitted with the certificate of payment itemizing all payments made to DBE firms since the last estimate period. A signed, original of the Final Certificate of Payment must be furnished to the Resident Engineer.

Arkansas Department of Transportation

DBE Subcontractor Payment Log

Job Number _____ Prime Contractor _____

Estimate No. _____ DBE Subcontractor _____

Estimate Ending Date_____ Date Payment Made to DBE_____

Item Code*	Item Description	Subcontract Unit Price	2nd Tier Unit Price	Quantity	Value Earned By Subcontractor

* Item Codes for pay items are shown on the estimate voucher

Total This Estimate	
Retainage Withheld This Estimate	
Net Total This Estimate	
___% Retainage Previous Total	
Total To Date	

DBE Payment Log must be received within 35 calendar days of the ending date of the estimate.

The Prime Contractor certifies that the payment listed has been made to the DBE Subcontractor and that the documentation of this payment is available for inspection upon request.

Authorized Signature_____ Title _____

Typed or Printed Name_____ Date _____

Department Use Only

Received By _____ Date _____

Verified By _____ Date _____ _____ RE Initials

Arkansas Department of Transportation

DBE Prime Contractor Payment Log

Job Number _____ DBE Prime Contractor _____

Estimate No. _____

Estimate Ending Date_____

Item Code*	Item Description	Contract Unit Price	Sub Unit Price	Quantity	Value Earned By DBE Prime

* Item Codes for pay items are shown on the estimate voucher

Total This Estimate	
Previous Total	
Total To Date	

DBE Payment Log must be received within 35 calendar days of the ending date of the estimate.

The Prime Contractor certifies that the information shown above is correct and represents the value earned by the DBE Prime Contractor during the above estimate period.

Authorized Signature_____ Title _____

Typed or Printed Name_____ Date _____

Department Use Only

Received

By _____

Date _____

Verified

By _____ _____

Date _____ RE Initials

Arkansas Department of Transportation

DBE 2nd Tier Payment Log

Job Number _____ Prime Contractor _____

Estimate No. _____ Subcontractor _____

Estimate Ending Date_____ DBE 2nd Tier Subcontractor _____

Date Payment Made to DBE _____

Item Code*	Item Description	2nd Tier Unit Price	Quantity	Value Earned by 2nd Tier

* Item Codes for pay items are shown on the estimate voucher

Total This Estimate	
Retainage Withheld This Estimate	
Net Total This Estimate	
___% Retainage Previous Total	
Total To Date	

DBE Payment Log must be received within 35 calendar days of the ending date of the estimate.

The Prime Contractor certifies that the payment listed has been made to the DBE 2nd Tier Subcontractor and that the documentation of this payment is available for inspection upon request.

Authorized Signature_____ Title _____

Typed or Printed Name_____ Date _____

Department Use Only

Received By _____ Date _____

Verified By _____ Date _____ _____ RE Initials

ARKANSAS DEPARTMENT OF TRANSPORTATION
CERTIFICATE OF PAYMENT

JOB _____ **F.A.P.** _____

JOB NAME _____

ORIGINAL CONTRACT AMOUNT $_____ **DBE GOAL $**_____*
(Contract Commitment)

DBE CONTRACT GOAL ___%

FINAL PAYMENT TO DBEs

The undersigned Contractor on the above mentioned project hereby certifies that the following amount(s) were paid to:

DBE Subcontractor(s)		Amount Paid
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
Total Paid to DBEs	$	

Only payments related to work, services, or material actually provided by DBE firms should be shown. Payments under second tier subcontracts from DBE firms to non-DBE firms should not be included. **DBE prime Contractors should include the value of work performed by its own forces.**

Contractor:			
Signature:			
Typed or Printed Name:			
Title:		Date:	

THIS "CERTIFICATE OF PAYMENT" IS TO BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO PROJECT ACCEPTANCE.

* If goal not met, brief explanation: _____

Rev. 12-13-16
Rev. 11-07-19

ARKANSAS DEPARTMENT OF TRANSPORTATION

CERTIFICATION TO SUBMIT DBE PARTICIPATION

JOB 080457

By submitting an internet proposal, the bidder irrevocably certifies that an amount equal to or greater than the Disadvantaged Business Enterprise (DBE) Goal established for this project will be performed by certified Disadvantaged Business Enterprise firms and the required DBE participation information will be submitted within 5 calendar days of the date of the bid opening.

Within five (5) calendar days of the date of the bid letting, all bidders shall furnish the required DBE Participation information to the Department on the forms provided to be considered a responsive bid. If a conditional award has been made and the successful bidder has not furnished the required information, the proposal will be rejected and their proposal guaranty forfeited. The proposal guaranty shall become property of the Commission, not as a penalty, but in liquidation of damages, sustained to the DBE Program. Award may then be made to the next lowest, responsive bidder or the work may be re-advertised as the Commission may decide.

Only work, materials, or services that will actually be provided by DBE firms will be credited toward the goal. The DBE firm's certification must be fully in effect at the letting date.

As an alternative, documentation of Good Faith Efforts to meet the DBE goal may be submitted to the Program Management Division prior to the deadline for proposals to be received.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

DISADVANTAGED BUSINESS ENTERPRISE
BIDDER'S RESPONSIBILITIES

Section 103 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 103.08(d)(2) is hereby deleted and the following substituted therefore:

(2) Within five (5) calendar days of the date of the bid letting, all bidders shall furnish the required DBE Participation information to the Department on the forms provided to be considered a responsive bid. If a conditional award has been made and the successful bidder has not furnished the required information, the proposal will be rejected and their proposal guaranty forfeited. The proposal guaranty shall become property of the Commission, not as a penalty, but in liquidation of damages, sustained to the DBE Program. Award may then be made to the next lowest, responsive bidder or the work may be re-advertised as the Commission may decide. Furthermore, any subsequent bidder's proposal will be considered non-responsive if their required DBE participation information was not submitted within the required five day period.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BIDDING REQUIREMENTS AND CONDITIONS

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth sentence of the second paragraph of **Subsection 102.01** is hereby deleted, and the following substituted therefore:

> Prospective bidders may file a questionnaire at any time; however, prospective bidders will not be given authorization to submit a proposal unless a rating has been extended based on an acceptable questionnaire.

The last paragraph of **Subsection 102.01** is hereby deleted.

The second sentence of **Subsection 102.02** is hereby deleted, and the following substituted therefore:

> The Notice to Contractors will contain a description of the proposed work, and information regarding access to proposal documents, plans, specifications, and the amount and nature of the proposal guaranty.

Subsection 102.03 is hereby deleted, renamed **Contents of Proposal Documents**, and the following substituted therefore:

> The proposal documents will state the location and description of the contemplated construction and will show the estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a schedule of items. The proposal documents will state the time in which the work must be completed, the amount of the proposal guaranty, and the date and time of the letting of work. The documents will also include any special provisions or requirements that vary from or are not contained in the standard specifications.
>
> All forms included in the proposal documents are considered a part thereof. The plans, specifications, and other documents designated in the proposal documents will be considered a part of the proposal whether included or not.

The first through fourth paragraphs of **Subsection 102.04** are hereby deleted, and the following substituted therefore:

> To become an eligible bidder, prospective bidders must be registered to bid in Arkansas with Bid Express. Prospective bidders must also contact the Program Management Division at (501) 569-2261 during regular business hours between the date the project is advertised and 4:30 p.m. on the day prior to the scheduled bid opening to request to become eligible to bid specific projects. Only prequalified contractors or their authorized representative may request to become an eligible bidder.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BIDDING REQUIREMENTS AND CONDITIONS

If the prospective bidder's prequalification rating is not "unlimited", the bidder shall file a certification with the Department citing all contracts in force and the unfinished value of such work. A prospective bidder will not be allowed to submit a proposal until a certification for the current bidding period is on file and the amount of work the contractor may be allowed to undertake is determined. The contractor's prequalification rating, less the unfinished value of all contracts in force, will determine the amount of additional work that the contractor may be allowed to undertake. A contractor will not be allowed to submit a proposal on an individual project for which the estimated cost is more than the amount that the contractor may be allowed to undertake, but the contractor will be allowed to submit a proposal on more than one project, providing that the estimated cost of each project is not more than the amount that the contractor may be allowed to undertake. In the event a contractor submits a low bid on more than one project and the aggregate amount is greater than the amount the contractor may be allowed to undertake, the Commission will exercise its discretion in the award of a particular project or projects.

A charge will be assessed for authorization to submit a proposal, paper copies of the proposal documents, and plans issued. These services are provided during regular business hours until 4:30 p.m. on the day prior to the scheduled bid opening at the Arkansas Department of Transportation, 10324 Interstate 30, Little Rock, Arkansas 72209, (501) 569-2261. Payment shall be made at the time services are provided or upon receipt of statement therefore. No refund will be allowed for bids not submitted or for plans or proposal documents returned.

The second sentence of the first paragraph of **Subsection 102.06** is hereby deleted, and the following substituted therefore:

The bidder is expected to examine carefully the site of the proposed work, the proposal documents, plans, specifications, supplemental specifications, and special provisions before submitting a proposal.

The first paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

The proposal shall only be submitted through the internet bidding service, Bid Express. The bidder shall specify a unit price in figures for each pay item for which a quantity is given. A unit price of "zero" ($0.00) is a valid price and will be considered. A blank unit price is not considered valid. The unit bid price should not be carried beyond 1 cent ($0.01). Any figures on the unit bid price beyond 1 cent will be dropped.

The second and third paragraphs of **Subsection 102.07** are hereby deleted.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BIDDING REQUIREMENTS AND CONDITIONS

The fifth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

> The bidder's proposal must be submitted with a digital signature containing the name of the individual, one or more members of the partnership, one or more members or officers of each firm representing a joint venture, or one or more officers of a corporation, or by an agent of the Contractor legally qualified and acceptable to the Department.

The sixth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

> If the proposal is submitted with a digital signature of any person who is not listed in the bidder's Prequalification Questionnaire (Questionnaire Form) as the individual, as a partner of a partnership, or as an officer of a corporation, authorization for such submittal should be on file with the Department prior to the download of bids. This authorization shall be made before the downloading of bids and be in the form of a Power of Attorney duly executed and signed by an official with power to constitute such authority.

The last sentence of the seventh paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

> Those items of Asphalt Binder that are subject to a minimum bid price will bear the note "(Minimum bid price is $120.00 per ton)" within the Schedule of Items of the proposal documents.

The first sentence of the ninth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

> The proposal documents for all federal aid projects will contain a bidders list.

The last sentence of the ninth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

> The information provided will not be used for contract awarding purposes but must be provided before the Contractor will be given authorization to submit proposals for future lettings.

Subsection 102.08 Irregular Proposals is hereby deleted, and the following substituted therefore:

(a) Proposals will be considered irregular and will be rejected for the following reasons:

(1) If the proposal does not contain a unit price for each pay item listed except in the case of authorized alternate pay items.

(2) If the proposal is not digitally signed by an authorized representative of the firm.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BIDDING REQUIREMENTS AND CONDITIONS

(3) If the proposal is not accompanied by the proper proposal guaranty.

(4) If a proposal is received from an individual, firm, partnership, or corporation with an interest, as principal, in another proposal for the same project.

(5) If the proposal is not accompanied by the Certification to Submit DBE Participation.

(b) Proposals will be considered irregular and may be rejected for the following reasons:

(1) If the proposal is not accompanied by a bid schedule and bid schedule narrative as required in the proposal documents.

(2) Unbalanced proposals in which the prices for some items are out of proportion to the reasonable costs representative of those items.

(3) If there are irregularities of any kind that may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.

The first sentence of **Subsection 102.09** is hereby deleted and the following substituted therefore:

No proposal will be considered by the Commission unless a guaranty in the form of a bank draft, certified check, or cashier's check drawn on a solvent bank or trust company, or a bidder's paper bond executed by an approved surety company has been received by the Program Management Division prior to the download of bids.

The following paragraph is hereby added after the first paragraph of **Subsection 102.09**:

Electronic bid bonds are allowed. The prospective bidder should verify their bid bond in their proposal prior to submission.

Subsection 102.10 is hereby deleted and the following substituted therefore:

The proposal shall only be submitted through the internet bidding service, Bid Express.

Subsection 102.11 is hereby deleted, and the following substituted therefore:

A bidder may withdraw or modify a proposal after it has been submitted to Bid Express, up to the time set for the deadline for proposals to be received. A proposal may also be withdrawn if the Commission fails to make an award within 40 calendar days after the date of downloading.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BIDDING REQUIREMENTS AND CONDITIONS

Subsection 102.12 is hereby deleted, renamed **Downloading of Proposals**, and the following substituted therefore:

> Proposals will be downloaded and then posted on the Department's website at the time and place indicated in the Notice to Contractors.

The last sentence of **Subsection 102.15** is hereby deleted, and the following substituted therefore:

> In any case, the prospective bidders will be contacted prior to the download of bids.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

MANDATORY ELECTRONIC CONTRACT

Paper Contract Documents and Forms will not be accepted.

The Department will only accept and execute an electronic contract for this project through Doc Express, a paperless contracting system. Prospective bidders will need to contact Doc Express to set up an account prior to the bid opening date. The toll-free phone number for Doc Express is 1-888-352-2439 and their website address is www.docexpress.com.

Section 103 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows.

The first sentence of **Subsection 103.06(a)** is hereby deleted, and the following substituted therefore:

The Contract shall be electronically signed by the successful bidder and electronically submitted to the Program Management Division, Construction Contract Procurement Section, together with the required bonds and proof of liability insurance, within 10 business days after the notice of award has been issued.

Subsection 103.08(d)(3)d. is hereby deleted, and the following substituted therefore:

Documentation of the bidder's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal; and

Subsection 103.08(d)(3)e. is hereby deleted, and the following substituted therefore:

Document confirmation from the DBE that it is participating in the contract as provided in the Contractor's commitment.

Subsection 103.08(d)(5) is hereby deleted, and the following substituted therefore:

The preceding information shall be submitted directly to the Arkansas Department of Transportation, Program Management Division, via Doc Express.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

MANDATORY ELECTRONIC DOCUMENT SUBMITTAL

Paper Document Submittals will not be accepted.

The Department will only accept electronically-submitted documents for consideration on this project. All correspondence and submittals to the Department shall be submitted through Doc Express, a paperless contracting system. When signed originals are required, the original shall be the document uploaded to Doc Express and the signature shall be the electronic signature applied through Doc Express. The Contractor shall use the same organizational account for project documentation as used to fulfill the requirements of the Mandatory Electronic Contract Special Provision. The toll-free phone number for Doc Express is 1-888-352-2439 and their website address is www.docexpress.com.

Any reference in the Standard Specifications to document submittal in writing or by U.S. Mail, facsimile, or in person is hereby amended to require that such documents be submitted using Doc Express with the following exceptions:

- Material delivery tickets which are used for payment or for field verification shall be submitted on paper as required by the Standard Specifications for Highway Construction, Edition of 2014.
- Any document with specific submittal requirements in state and/or federal law or federal regulations that conflict with the requirements of this Special Provision shall be submitted in accordance with such state and/or federal law or federal regulations.

A user guide is available on the Department's web page to assist Contractors with the use of Doc Express. The "Contractor Guide to Using Doc Express" is available on the Department's web page at this link:

http://ardot.gov/construction_division/Contractor_Guide_DocExpress.pdf.

The Contractor may provide access for subcontractors to view and submit items in Doc Express by following the instructions provided in the "Contractor Guide to Using Doc Express". Once an organizational account is activated and the Contractor provides access to the contract, a subcontractor may submit documents to the Contractor in Doc Express by uploading the electronic documents as directed in the User Guide. Any documents uploaded by the subcontractor must be then retrieved and published by the Contractor within Doc Express for further action by the Engineer. The Engineer will not review or take any actions on any documents submitted by the subcontractor until the document has been appropriately submitted by the Contractor.

Any submittals, documents, subcontracts, proposals, working drawings, or any other items submitted by the Contractor within Doc Express are not considered approved by the Engineer until written notification of the approval is published by the Engineer in the "CON-Correspondence–From Department to Contractor" drawer in Doc Express. Any action taken by the Contractor prior to this notification is taken at the Contractor's own risk.

The Department's System Administration team has no authority to take action on any documents submitted to the system. Access for this team is for management of the application only. Knowledge of any document submitted is not imputed to the Department by the knowledge of Systems Administration.

The requirements of this Special Provision shall supersede the requirements of all other Special Provisions unless such Special Provision includes a stated exception to this Special Provision.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

ASSESSMENT OF WORKING DAYS – MAINTENANCE OF TRAFFIC

DESCRIPTION: To accommodate the off peak lane closure time limits shown in the contract "Maintenance of Traffic" Special Provision, the assessment of Calendar Days or Working Days will be based upon the same conditions as a normal Working Day.

For Calendar Day or Working Day projects, the Contractor shall be permitted to begin work on Sunday evening when the allowable lane closure period begins. Sunday evening shall be the allowable off peak lane closure time defined in the contract "Maintenance of Traffic" Special Provision but not prior to 6:00 p.m. On Working Day projects, time will not be assessed for Sunday. No other work will be allowed on Sunday unless an emergency is declared by the Department.

If the Contractor elects to work Friday and complete work on Saturday in accordance with the contract "Maintenance of Traffic" Special Provision, time will be assessed as appropriate for Saturday.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT

DESCRIPTION: Section 108, Prosecution and Progress, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 108.02(b)(4) b. Working Day Contract. is hereby deleted and the following is substituted therefor:

b. Calendar Day Contract. Unless the Contractor is otherwise advised in writing, the Work Order for a calendar day contract shall become effective on the fifteenth calendar day following the execution of the Contract by the Department. Should the effective date fall on Sunday, a legal holiday designated in Subsection 101.01 (c), Monday following a holiday on Sunday, or Friday preceding a holiday on Saturday, the effective date shall be the next work day. The written Work Order from the Engineer will follow with the effective date being as specified.

The assessment of contract time will commence when the Contractor begins work or no later than 90 calendar days after the issuance of the work order if the contractor has not commenced work. The contractor will submit written notification to the Engineer five days prior to commencing work.

Subsection 108.02(c) is hereby deleted.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

CLEARING AND GRUBBING

Section 201, Clearing and Grubbing, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 201.04, Clearing and Grubbing, is amended by adding the following:

All existing fence within the construction area that is entangled with the trees to be cleared and grubbed or fence that stands alone shall be removed and disposed of by the Contractor.

Subsection 201.09, Basis of Payment, is amended by adding the following:

Work for the removal and disposal of fence for the entire project will not be paid for directly but will be considered to be included in the price bid for the items of Clearing and Grubbing.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

REMOVAL AND DISPOSAL OF GUARDRAIL

DESCRIPTION: This item shall consist of removing existing guardrail, line posts and terminal anchor posts, including concrete footings; disposing of existing terminal anchor posts and all materials; and filling guardrail post holes in accordance with these specifications and from the locations shown on the plans or as directed by the Engineer.

CONSTRUCTION METHODS: The existing guardrail, line posts, terminal anchor posts and footings shall be removed. All materials will become the property of the Contractor.

The Contractor shall fill with earth all holes where guardrail posts and terminal anchor posts have been removed. Earth in the holes shall be thoroughly compacted with a mechanical tamper until it is as firm and unyielding as the surrounding material.

METHOD OF MEASUREMENT: The removal and disposal of guardrail, completed and accepted, will be measured by the linear foot, in place before removal. Terminal sections shall be considered to be 25 feet in length.

BASIS OF PAYMENT: Work completed under this item and measured as provided above will be paid for at the contract unit price bid per linear foot for Removal and Disposal of Guardrail, which price shall be full compensation for removing and disposing of all materials, including terminal anchor posts; for filling the guardrail post holes and terminal anchor post holes; and for all equipment, tools, labor, materials and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Removal and Disposal of Guardrail	Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

RUMBLE STRIP REMOVAL

DESCRIPTION. This item shall consist of cold milling and removing asphalt pavement from the existing rumble strip to a depth of 2-inch or as directed by the Engineer and placing ACHM Surface Course (1/2") (PG 76-22) in the cold milled area. Areas where rumble strip shall be removed will be repaired in accordance with these specifications or as directed by the Engineer.

EQUIPMENT: The equipment for removing rumble strip shall be subject to the approval of the Engineer and shall comply with the following:

1. Milling Equipment shall be self-propelled with sufficient power, traction, and stability to maintain an accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing from the existing pavement by means of a skid or matching shoe. The milling machine shall have an effective means for preventing dust resulting from the operation from escaping into the air. Provision shall be made, either integrally with the milling machine or by the use of additional equipment, to remove the material being cut from the surface of the roadway.

Any other equipment needed for milling shall have prior approval from the Engineer.

MATERIALS. The ACHM Surface Course (1/2") (PG 76-22) used shall conform to the requirements of Section 407 of the Standard Specifications for Highway Construction, Edition of 2014.

CONSTRUCTION METHODS: The existing pavement shall be cold milled to a depth of 2-inch below the existing pavement surface. The number of passes and the depth of each pass required to obtain the total depth to be removed will be determined by the Contractor. The equipment shall operate at a rate of travel that will provide a surface meeting the applicable surface requirements.

The Contractor will be responsible for the removal and disposal of all milled material in a manner approved by the Engineer. The Contractor will also be responsible for keeping the milled area reasonably clean.

Before placing the ACHM Surface Course, the milled surface shall be cleaned and given a tack coat. The ACHM Surface Course placement shall conform to the requirements of Section 407 of the Standard Specifications.

METHOD OF MEASUREMENT. Rumble strip removal and repair of removed areas will be measured by the linear foot. The removal of rumble strips will be measured in place before removal.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for "Rumble Strip Removal", which price shall be full compensation for milling and removing the existing pavement; for disposing of

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RUMBLE STRIP REMOVAL

material removed; for furnishing, transporting, mixing, placing, spreading, consolidating, and finishing of materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Removal of Rumble Strip	Linear Foot

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NESTING SITES OF MIGRATORY BIRDS

DESCRIPTION: All structures on this project, including new, temporary, and existing bridges and/or culverts, may be the nesting sites of migratory birds. These birds include, but are not limited to, swallows and phoebes. The birds and their habitat are protected under the Migratory Bird Treaty Act. Demolition of or construction activities on bridge and culvert structures that might disrupt egg incubation or feeding and sheltering of young migratory birds shall not occur without written permission from the Engineer.

If construction is planned on bridges or culverts when migratory birds are actively building nests, the Contractor shall utilize Option 1 and/or 2 below to deter birds from nesting to allow construction activities to proceed.

CONSTRUCTION METHODS: Restrictions to the Contractor's activities shall include, but are not limited to, the following:

1) Demolition of or construction activities on structures (i.e. sand blasting, painting, etc.) will not be permitted when migratory bird nests are considered active without written permission from the Engineer. This normally occurs in Arkansas from March 1 to August 31, but may occur outside of those dates during unusual weather events. The Contractor shall submit to the Engineer details for all work proposed to be performed on the structure from March 1 to August 31, or while nests are active with eggs or young. A determination will be made by the Engineer within 10 business days concerning the possible impacts of the work and will then accept or reject the Contractor's proposal.

2) **OPTION 1** - The Contractor shall prevent birds from nesting by erecting netting at any time outside of the active nesting season (generally after August 31 to March 1). The Contractor may be allowed to erect netting during the active nesting season if no active nest is present on the bridge or structure. Net openings shall be ½ inch or smaller after installation. Birds that nest despite prevention efforts shall not be removed or disturbed. Netting shall be installed securely and maintained in such a manner that it will not pose a safety hazard.

3) **OPTION 2** – The Contractor may remove inactive nests (those with no eggs or young) via hydro-cleaning or scraping at any time outside of the nesting season (generally after August 31 to March 1). The Contractor will be allowed to scrape or hydro-clean daily to remove any mud or debris placed on the structure by birds attempting to nest, as long as there are no eggs or young in the nests or partial nests. Adult birds cannot be harmed, injured, or harassed in any way except by removal of the unoccupied nests. Exclusionary netting does not have to be used if the Contractor agrees to be diligent and make sure no birds are allowed to nest on the structure.

4) No other methods of deterrence will be permitted without written approval of the Engineer.

5) Migratory birds can build nests very quickly, specifically, in less than two days. If the Contractor allows even one nest on the structure to become active (containing eggs or young birds), they shall be required to stop construction/demolition until the young have voluntarily left the nest (up to six weeks), or get approval through the Engineer from the ARDOT Environmental Division to work around the birds in a manner that does not disrupt incubation, feeding, and/or sheltering of the birds.

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6) If no birds are nesting on or in the bridge or culvert structures between March 1 and August 31, a request may be made to the Engineer to allow demolition or construction to proceed. The Engineer will make the final determination concerning the presence or absence of nesting migratory birds within ten business days and will accept or reject the Contractor's proposal concerning the demolition or construction.

CONTRACTOR NEGLIGENCE: The Contractor will be assessed the amount of any and all fines and penalties assessed against and costs incurred by the Department which are the result of the Contractor's failure to comply with this Special Provision. The Department will not be responsible for any delays or costs due to the Contractor's failure to comply with this special provision. The Contractor will not be granted additional compensation or contract time due to noncompliance.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT: All costs incurred in complying with this Special Provision will not be measured or paid for separately, but will be considered included in the contract unit prices bid for other items of the contract.

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EXCAVATION

DESCRIPTION: This Special Provision shall be supplementary to Section 210, Excavation, of the Standard Specifications for Highway Construction, Edition of 2014, and shall include the following:

The method used for excavating material to achieve design cut slopes shall not include blasting within the project limits.

There will be no direct payment made for fulfilling the requirements of this Special Provision, but compensation shall be included in the price bid for Unclassified Excavation.

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SOIL STABILIZATION

Section 210 Excavation and Embankment of the Standard Specifications, Edition of 2014, is hereby amended as follows:

Subsection 210.07 Construction Requirements is expanded to include the following:

At locations that the Engineer designates the existing soils to be unstable and cannot be stabilized through normal drying and compactive efforts, the Contractor may, with the approval of the Engineer, utilize the following additives to expedite the drying process:

- Quicklime (dry) meeting the requirements of Subsection 301.03(b), or
- Portland cement and/or fly ash meeting the requirements of Subsection 307.03(b)

The Engineer shall determine which additive will be used. The rate of application shall be determined by trial mixing and shall be approved by the Engineer. The spreading and mixing procedure used shall thoroughly and uniformly disperse the material into the soil. Any procedure that results in excessive loss of material or that does not achieve the desired results shall be immediately discontinued.

Subsection 210.12 Method of Measurement is expanded to include the following:

(g) Soil Stabilization will be measured by the ton of the additive used.

Subsection 210.13 Basis of Payment is expanded to include the following:

(d) Soil Stabilization completed and accepted and measured as provided above will be paid for at the contract unit price bid per ton for Soil Stabilization, which price shall be full compensation for furnishing, hauling and placing the material; for spreading and mixing; and for all labor, equipment, tools and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Soil Stabilization	Ton

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RESTRICTIONS ON THE USE OF RECYCLED ASPHALT PAVEMENT MATERIAL

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added as the last bullet following the first paragraph of **Subsection 404.01(b), Design Requirements**:

- Recycled asphalt pavement materials will not be permitted in any mixes using PG 76-22 asphalt binder.

The second paragraph of **Subsection 416.01, Description,** is hereby deleted, and the following is substituted therefor:

> Unless otherwise provided, these provisions allow the Contractor to utilize recycling of reclaimed asphalt pavement material in any type mixture specified in Sections 405, 406, 407, and 417 except for those mixes using PG 76-22 asphalt binder. The recycled mixture shall meet all of the requirements of the mixture type specified on the plans.

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SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS

Division 106 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added to **Subsection 106.04, Acceptance of Materials:**

All ACHM Contractor Acceptance Tests shall be submitted electronically by use of the ACHM Microsoft Excel Spreadsheet for Contractors/Suppliers and on paper.

The ACHM Microsoft Excel Spreadsheet for Contractors/Suppliers can be downloaded from the following website: http://www.ardot.gov/contracts/contractor_information/contractor.aspx.

To download this file and the supporting documentation, click on the link labeled Contractor_ACHM.exe which is listed under User Help File and Utilities on the website noted above.

Use of this file requires Microsoft Excel 2000, 2003, or 2007.

The preferred method of transmitting the file is to e-mail the completed ACHM Microsoft Excel Spreadsheet for Contractors/Suppliers to the Department's ACHM Plant Inspector assigned to the project. It is also acceptable to transmit the file by Compact Disk (CD) or other electronic device. Regardless of the method of transmission used, the signed paper acceptance tests must be provided to the Resident Engineer.

Any questions or issues arising from the use of this file should be referred to the Resident Engineer.

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PRICE ADJUSTMENT FOR ASPHALT BINDER

A price adjustment clause is included in this Contract to provide additional compensation to the Contractor or a credit to the Department for fluctuations in asphalt binder prices. This price adjustment is dependent upon a change in the average price of asphalt binder which results in an increase or decrease in the price of products utilized on this project.

Payment. Payment will be made to the Contractor for monthly fluctuation in the price of asphalt binder used in performing the applicable items of Asphalt Concrete Hot Mix work as listed in the table below when the asphalt binder price fluctuates from the base price defined below. Payments may be positive, negative, or nonexistent depending on the circumstances. Payments or deductions for the asphalt binder price adjustment will be included in the Contractor's current estimates, and the payment or deduction authorized for each estimate will be based upon the quantities for applicable items of work.

The Asphalt Binder Price Adjustment will be a dollar amount paid as compensation to the Contractor, or as a credit to the Department as reflected on the Current (or Final) Estimate Summary Report as Payment Adjustments.

Asphalt Binder Price Adjustment (ABPA). The Asphalt Binder Price Adjustment (ABPA) for the current estimate will be computed according to the following formula:

$$ABPA = Q \times D$$

Where

ABPA = Asphalt binder price adjustment, in dollars;
Q = Quantities paid for the applicable items on the current estimate, in tons of mix;
D = Allowable price differential, in dollars.

The above formula will be applied to each individual payment of the applicable item. When the Current (or Final) estimate is generated, the sum of these individual adjustments will be included as a Payment Adjustment.

Applicable Items of Asphalt Concrete Hot Mix Work	
ITEM OF WORK	SPECIFICATION NUMBER
Asphalt Binder in ACHM Base Course	405
Asphalt Binder in ACHM Binder Course	406
Asphalt Binder in ACHM Surface Course	407

When the units of measure in this contract for the items of work listed in the table do not correspond with the units shown in the table (i.e. Asphalt Concrete paid by the square yard, etc.), those items will not be subject to the terms of this special provision or any asphalt binder price adjustment.

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PRICE ADJUSTMENT FOR ASPHALT BINDER

The allowable price differential, "D", for the current estimate will be computed according to the following formula:

$$D = P - P_{(b)}$$

P, the asphalt binder current price in dollars per ton, is the Monthly Asphalt Binder Price Index for the month in which the payment entry is entered.

$P_{(b)}$, the asphalt binder base price in dollars per ton, is the Monthly Asphalt Binder Price Index for the month in which the bids for the work were received.

Asphalt Binder Index Determination. The Monthly Asphalt Binder Price Index will be determined by calculating the average for performance-graded binder using the Selling Price of PG 64-22 paving grade. The monthly asphalt binder price will be an average of five asphalt binder prices. The prices will be furnished by the four largest asphalt binder suppliers in the State of Arkansas as determined by the previous calendar year. For an asphalt supplier to be included in the asphalt binder price index they must supply at least ten percent of the asphalt binder in Arkansas. The final component in the asphalt binder price index will be the Asphalt Weekly Monitor® furnished by Poten & Partners, Inc. The issue of the Asphalt Weekly Monitor® used will be for the last full week in the previous month received by the Department prior to the first day of the index month. The four largest suppliers included in the asphalt binder price index shall furnish the Department with their average price on the Thursday before the Friday of the last full week of the month. If any supplier fails to submit a price by this deadline, that supplier's price will not be included in the asphalt binder price index for that month.

Supplemental Items Subject to Adjustment. Items included in the contract that are listed in the table above are subject to adjustment in accordance with this provision, regardless of any amount of overrun to the plan quantity. Any new items of work added to the Contract by supplemental agreement that are listed in the table above will be subject to the asphalt binder price adjustments in accordance with this provision. The base asphalt binder price, $P_{(b)}$, for any newly added eligible items will be the same $P_{(b)}$ as the eligible items in the Contract, and the new unit price established by supplemental agreement will be determined accordingly.

Viewing Asphalt Binder Price Index. Historical asphalt binder price index values will be available on the Department's website using this web link:

http://www.ardot.gov/ProgCon/AHTD_Asphalt_Binder_Index.pdf

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PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 410.09(b)(1) is deleted and the following substituted therefore:

(1) Properties in Table 410-1. Acceptance with respect to the properties listed in Table 410-1 will be by lot. Acceptance of a standard lot will be based on the Percent Within Limits (PWL). Acceptance of a sublot will be based on the results of the test(s) performed on samples from that sublot.

In Table 410-1, the term "mix design value" refers to the value shown in the accepted mix design.

(a) Percent Within Limits (PWL). The PWL analysis will only be performed on lots when 3 or more tests are performed on the lot. Acceptance of a partial lot with 2 or less tests performed on the lot will be based on the lot average of the actual number of tests made on that partial lot. The Percent Within Limits (PWL) will be based on the mean, standard deviation, and quality index of each lot's test results. The PWL and Pay Factors (PF) for the lot will be calculated as described below. The upper PWL (PWL_U) and lower PWL (PWL_L) are determined from the Table 410-2. Variables used in the calculations are as follows:

x_i = individual test value (sublot)
x_a = arithmetic mean of the individual test values
n = number of tests (sublots)
s = sample standard deviation
Q_U = upper quality index
USL = upper compliance limit (from Table 410-1)
Q_L = lower quality index
LSL = lower compliance limit (from Table 410-1)

(1) Calculate the arithmetic mean (x_a) of the test values:

$$x_a = (\Sigma x_i)/n$$

(2) Calculate the sample standard deviation(s):

$$s = [\Sigma((x_i - x_a)^2/(n - 1))]^{1/2}$$

(3) Calculate the upper quality index (Q_U):

$$Q_U = (USL - x_a)/s$$

(4) Calculate the lower quality index (Q_L):

$$Q_L = (x_a - LSL)/s$$

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(5) From Table 410-2, use Q_U to determine the upper PWL (PWL_U).

(6) From Table 410-2, use Q_L to determine the lower PWL (PWL_L).

(7) If Q_U or Q_L is a negative number, then calculate the percent within limits for Q_U or Q_L as follows: enter Table 410-2 with the positive value of Q_U or Q_L and obtain the corresponding percent within limits for the proper sample size. Subtract this number from 100.00. The resulting number is the value to be used in the next step (Step 8) for the calculation of quality level.

(8) Calculate the total percent within limits:

$$PWL = (PWL_U + PWL_L) - 100$$

(9) Calculate the Pay Factor (PF) for each property. Pay Factors will be calculated by using the following equation:

$$PF = 55 + 0.5 \times PWL$$

(10) Calculate the Total Pay Factor (PF_T) for the lot. The PF_T will be calculated based on the individual Pay Factors (PF) with the following weighting applied: 20 percent asphalt binder content (PAB), 35 percent air voids (PAV), 10 percent voids in mineral aggregate (VMA) and 35 percent density (PC). Calculate the PF_T by using the following formula, where the PF for each property is determined in Step (9):

$$PF_T = (0.20)\ PF_{PAB} + (0.35)\ PF_{PAV} + (0.10)\ PF_{VMA} + (0.35)\ PF_{PC}$$

All lots of material with a PF_T less than 80.00 shall be removed and replaced with acceptable material by the contractor at no cost to the Department. Payment for sections where removal and replacement is required will be withheld or recovered, and released after replacement has been acceptably completed. The quantity for payment will be the original quantity and measurement of the quantity used in replacement operations will not be considered. Sampling and testing of the replacement material will be according to Subsection 410.09(a). Acceptance of the replacement material will be determined using the acceptance criteria for Partial lots with two (2) or less tests as outlined below.

For any single property except density, if the result of the single test in a sublot falls outside the limits shown as “Sublot Rejection Limits”, that sublot shall be removed and replaced at no cost to the Department. In the sublot containing the Department’s lot test, if the result of either the Contractor’s sublot test or the Department’s lot test fall outside the sublot rejection limits, the two tests will be averaged and the average of the two test results used to determine acceptance or rejection of the sublot. Sampling and testing of the replacement material will be according to Subsection 410.09(a). Acceptance of the replacement material will be determined using the acceptance criteria for Partial lots with two (2) or less tests as outlined below.

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For density, if a test for a sublot is more than 2.0 percentage points above or below the compliance limits for the type of mix, that sublot will be further evaluated as follows:

Two additional density tests will be performed by the Department on a statistically random basis within that sublot, except that only one additional test will be performed if the sublot contains both a Contractor sublot test and a Department lot test. If the average of the three tests is within 2.0 percentage points above or below the compliance limits, the sublot will be accepted. The average of the three test results will be used as a single value to compute the arithmetic mean of the test values for the lot for the PWL calculations.

If the average is outside the sublot rejection limits, the sublot shall be removed and replaced at no cost to the Department. Sampling and testing of the replacement material will be according to Subsection 410.09(a). Acceptance of the replacement material will be determined using the acceptance criteria for Partial lots with two (2) or less tests as outlined below.

(b) Partial lots with two (2) or less tests. Acceptance of a partial lot will be based on the average of the actual number of tests made on that partial lot.

When the average of the test results for a partial lot fall within the range shown in Table 410-1 as “Compliance Limits”, the partial lot will be accepted with no price reduction for those properties. If the average of the test results for a partial lot for any single property listed in the table falls within the limits shown as “Price Reduction Limits”, the material may be left in place at a reduced price as specified in Subsection 410.09(d). If the average of the test results for a partial lot for any single property listed in the table falls outside the limits shows as “Lot Rejection Limits”, the entire partial lot shall be removed and replaced at no cost to the Department. Sampling and testing of the replacement material will be according to Subsection 410.09(a).

For any single property except density, if the result of the single test in a sublot falls outside the limits shown as “Sublot Rejection Limits”, that sublot shall be removed and replaced at no cost to the Department. In the sublot containing the Department’s lot test, if the result of either the Contractor’s sublot test or the Department’s lot test fall outside the sublot rejection limits, the two tests will be averaged and the average of the two test results used to determine acceptance or rejection of the sublot. The average of the two test results will also be used as a single value to compute the average for the partial lot for acceptance and adjustment.

For density, if a test for a sublot is more than 2.0 percentage points above or below the specification limits for the type of mix, that sublot will be further evaluated as follows:

Two additional density tests will be performed by the Department on a statistically random basis within that sublot, except that only one additional test will be performed if the sublot contains both a Contractor sublot test and a Department lot test. If the average of the three tests is within 2.0 percentage points above or below the compliance

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limits, the sublot will be accepted. The average of the three test results will be used as a single value to compute the average for acceptance and adjustment of the partial lot.

If the average is outside the sublot rejection limits, the sublot shall be removed and replaced at no cost to the Department. In that case, the result of a density test performed on the replacement material will be used to calculate the average for acceptance and adjustment of the partial lot.

Subsection 410.09(b)(2), Pavement Smoothness, is hereby deleted and the following substituted therefore:

(2) Pavement Smoothness. (a) Binder and Intermediate Surface Courses. For full payment, the finished surface of binder and intermediate surface courses and any areas of final surface courses that have less than 4" (100 mm) of ACHM over the existing pavement (excluding leveling), when checked with a 10′ (3 m) straight-edge parallel to the centerline, shall show no variation more than 3/16" (5 mm) for binder courses and not more than 1/8" (3 mm) for surface courses When surface tests indicate surface tolerances do not meet these requirements, changes to the paving operations shall be made before beginning the next day's operations.

All transverse joints shall be straight-edged immediately following rolling of the joint. Paving will not continue until the transverse joint meets the applicable surface tolerances shown above.

Areas not meeting the above surface test requirements shall be corrected by skin patching, or other methods that would provide the required smoothness. All corrective work and material necessary to correct surface tolerance deficiencies shall be at no cost to the Department.

(b) Final Surface Courses on Main Lanes and Ramps. The finished pavement surface, except as noted in paragraph (a) above and ramps, acceleration/deceleration lanes, shoulders, islands, tapers, or other incidentals, will be determined by the use of the Inertial Profiler (IP) and the International Roughness Index (IRI). Pavement smoothness will be determined for each lane by obtaining the IRI for the left and right wheel paths in an individual lane. After the final ACHM surface has been placed, the averaged IRI value will be used to determine areas requiring correction and applicable payment price adjustments.

(c) Equipment and Operator. The Contractor shall furnish a properly calibrated and documented Inertial Profiler (IP), capable of exporting raw profile data in an unfiltered ERD file format or an approved ADF file format. The IP shall also produce a profilogram (profile trace of the surface tested). The IP shall conform to the Class I requirements of the most recent revision of ASTM E950.

Profile analysis for determination of IRI and areas of localized roughness will be conducted using ProVAL version 3.6 or the most recent version of ProVAL Software. IRI values shall be reported in inches/mile (in/mi).

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The Contractor shall furnish an operator, trained in the operation of the particular IP.

(d) Pavement Surface Testing. In the presence of the Engineer, the Contractor shall set up a test section to calibrate the distance sensor and check the profile system calibration using the manufacturer's calibration procedures before each day's testing. Unless otherwise authorized by the Engineer, all smoothness testing shall be performed in the presence of the Engineer or his/her designated representative. For the duration of the work, every reasonable effort shall be made to test smoothness within 5 working days after each day's paving operation. Scheduling and testing shall be coordinated with the Engineer. The Engineer and the Contractor shall mutually agree upon scheduling of smoothness testing.

The Contractor shall remove all objects and foreign material on the pavement surface prior to surface evaluation. The Contractor will be responsible for all traffic control associated with testing and any corrective work (when applicable) that is required of the final pavement surface.

The IP shall be run in the final design direction of traffic. Profiles shall be measured in the left and right wheel paths of each lane. Each lane's wheel path shall be tested and evaluated separately. The Engineer shall determine the length in miles for each main lane of traffic. The IP shall be operated at the optimum speed as defined by the manufacturer.

The Contractor shall profile the final surface of the entire job length to determine if the pavement meets the smoothness values specified below and to determine total incentive/disincentive. Intermediate lifts will not be eligible for incentive but may be profiled to isolate rough areas requiring proactive grinding. The Engineer will verify the profiles by testing approximately 10% of the pavement. This testing will be performed by the Engineer, using either the IP furnished by the Contractor or one provided by the Department, at the option of the Engineer. If the IP is furnished by the Contractor, the Contractor may elect to allow their employee to drive the IP, but the sensors and data collection systems will be operated by the Engineer's representative during each of the verification runs.

The averaged IRI values for all segments will be used to determine payment incentive. The right and left wheel path readings will be averaged for every point read during the 528' lane segment. Areas less than 0.1 mile (200 m) shall be combined with a full 0.1 mile segment before profiling. The left and right averaged wheel path points will be averaged to obtain an IRI value for the lane segment.

Any longitudinal joints within the limits of a travel lane shall be uniform to a degree that no depressions or high spots greater than 1/8" (3 mm) in 10' (3 m) are present when tested with a straightedge placed perpendicular to the centerline of the lane.

Smoothness profiles of the first day's run will be analyzed before the second day's run commences. Should the first day's run exceed an IRI of 60 inch/mile the paving operations shall be discontinued until better methods and equipment are obtained or until the present equipment is properly adjusted. If adjustments are necessary from the first day's run, the second day's run will be profiled to determine the ability of the equipment to finish the pavement

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within the specified tolerance. If the second day's operation fails to produce a finished surface IRI of 60 inch/mile or less, the Contractor shall produce new methods and/or equipment that will obtain the specified results. The new methods and/or equipment will be given trial runs as indicated above for the original equipment. The finished pavement surface will be measured for roughness by the Contractor. Roughness will be measured using an IP. The profiler manufacturer's data collection setting specifications shall be furnished and approved by the Engineer. The IRI shall not exceed 60 inches per mile per 0.1 mile section. Bridges will not be included in the calculation of the IRI.

Areas of localized roughness will be identified using the ProVAL "Smoothness Assurance" analysis, calculating IRI with a short continuous segment length of 25 ft. (7.62 m), short continuous threshold of 120 in/mi, and the 250 mm filter applied. The longitudinal limits of corrective work shall be taken from the ProVAL "Grinding" section within the "Smoothness Assurance" analysis, using the "Default Grinding Strategy" option and corrective grinding shall be performed as specified below. The finished surface of 25' (7.5 m) sections adjacent to an existing structure or the end of pavement shall not show surface deviations in excess of 1/8" (3 mm) in 10' (3 m) with the approved inertial profiler.

For the duration of the work every reasonable effort shall be made to test smoothness within 5 working days after each day's run. All data obtained from the profiling operations will be furnished to the Engineer at the end of each day's profiling operations. Scheduling and testing shall be coordinated with the Engineer. The Contractor shall be responsible for traffic control associated with their own testing and the Department's verification testing.

Areas not meeting the above surface test requirements for the final surface course shall be corrected in such a manner as to maintain a quality pavement having the same uniform texture and appearance as the adjoining surface. Skin patching the final surface course will not be permitted.

When the corrective action involves removing and replacing a section of the final surface, the minimum area to be removed shall be 50 linear feet (15 m) of length for the full width of the course placed. Replacement of the final surface shall be accomplished using a paver.

Grinding will be allowed, if necessary, to reduce the IRI as determined by the profiling equipment, as appropriate, in any 0.1 mile (200 m) section on all profiles, including the trial run. The grinding equipment shall be power driven and specifically designed to smooth and uniformly texture the pavement by means of diamond blades.

After the areas of localized roughness have been identified and grinding has taken place, the smoothness of the pavement shall be measured again to determine if the pavement has met the smoothness requirements for 100% pay. If grinding of localized roughness is required as described previously, positive price adjustments will not be allowed on that section, but the Contractor can receive a maximum of 100% pay. Continual production of a final surface not qualifying for 100% payment will not be allowed.

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The averaged IRI values will be used to determine price adjustments. The right and left wheel path readings will be averaged for every point read during the 528' lane segment. Areas less than 0.1 mile (200 m) shall be combined with a full 0.1 mile segment before profiling. Then the left and right averaged wheel path points will be averaged to obtain an IRI value for the lane segment.

All corrective work and material necessary to correct surface tolerance deficiencies for surface courses shall be at no cost to the Department.

In addition to the above requirements for profile indices, areas representing high points having deviations in excess of 0.3” (7.5 mm) in 25’ (7.5 m) as determined by the profilograph or 1/8” (3 mm) in 10’ (3 m) as determined by the straightedge, shall be reduced by grinding until such deviations as indicated by retest do not exceed the above limits.

Areas showing low spots of more than 1/4” (6 mm) in 10’ (3 m) in the longitudinal direction shall be corrected by grinding or shall be removed and replaced to an elevation that will not show surface deviations in excess of 1/8” (3 mm) in 10’ (3 m).

Furnishing the IP, taking all required profiles, and performing all necessary computations will not be measured and paid for separately but will be considered as part of quality control and acceptance sampling and testing included in the bid items for the ACHM items.

(e) Submittals. The Contractor shall submit the printed profile trace (graphical trace) signed by the operator, indicating each segment’s averaged IRI value, at the end of each day’s profiling operations.

The Contractor shall also submit electronic files, with the printed profile trace, in ERD and ADF format that represent the raw data from each pass. The electronic file names shall follow the standardized format shown in the following:

YYMMDD-J-T-N-D-L-W-S

Where:

YY=Two-digit year
MM=Month (including leading zeros)
DD=Day of Month (including leading zeros)
J=the Department Job Number
T=Route Type (I, AR, US, etc.)
N=Route Number (no leading zeros) and auxiliary ID (if applicable, i.e. E, W)
D=Primary route direction (I or D, indicating Increasing or Decreasing; Increasing = North or East, Decreasing = South or West)
L=Lane number (1 for driving lane, increasing by one for each lane to the left)
W=Wheel path (L (left), R (right), or B (both))
S=Beginning Station

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Pavement smoothness within each wheel path will be measured in terms of IRI (in/mi) according to the Pavement Surface Testing section above. Price adjustments apply to the total area for the lane width represented by the profile index for a continuous main lane section at least 0.1 mile (200 m) long. Price adjustments for incentives are only based on the initial measured profile index of continuous sections of at least 0.1 mile (200 m) in length, excluding approach slabs and bridges, and before any corrective work; however, grinding will be allowed to achieve 100% full payment in lieu of accepting a disincentive for that section. Ramps, acceleration/deceleration lanes, shoulders, islands, tapers, or other incidentals shall not be considered for price adjustments. If grinding is required due to failure to meet the required profile index, the pavement will be ground to a level which qualifies for 100% payment. The IRI will be used to determine acceptance for Pavement Smoothness and Price Adjustments for each 0.1 mile segment.

Subsection 410.09(d) is hereby deleted and the following added therefor:

(d) Price Adjustments for Ride Smoothness. **(1) Ride Smoothness Lot:** Upon completion of the final surface of the main lanes of a project, the Contractor shall provide documentation of eligibility for price adjustments as defined in this subsection. The Department reserves the right to verify information provided by the Contractor. In the case of dispute regarding price adjustments, the Department decision shall govern.

Price adjustments on lots accepted based on Percent Within Limits (PWL) will be calculated as part of the Total Pay Factor (PF_T).

The Project shall be divided into Ride Smoothness Lots consisting of 0.1 mile (200 meter) sections of each travel lane starting at the beginning of the ACHM noted on the plans or as constructed. Partial Ride Smoothness lots will not be considered for ride smoothness price adjustments. Travel lanes shall consist of traffic lanes, turning lanes, or painted paved medians. Ramps, acceleration/deceleration lanes, crossovers, turnouts, shoulders, driveways, islands, patching, tapers, or other incidentals shall not be considered as part of a Ride Smoothness lot for price adjustments. Exceptions, including bridges and approach slabs, shall not be considered a part of a Ride Smoothness Lot.

(2) Price Adjustments. The Contractor shall determine the smoothness of the finished surface for each Ride Smoothness Lot utilizing an IP conforming to the Class I requirements of the most recent revision of ASTM E950.

No incentive payment for smoothness will be considered for a Ride Smoothness Lot if any portion of that Ride Smoothness Lot contains patched areas less than 200’ (60 m) in length or has been ground to obtain the required smoothness. If grinding is required due to failure to meet the required IRI, the pavement will be ground to a level which qualifies for 100% payment.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Price adjustments shall be made as follows:

PRICE ADJUSTMENTS FOR RIDE SMOOTHNESS		
INTERNATIONAL ROUGHNESS INDEX In/Mi./0.1 Mi. section	INTERNATIONAL ROUGHNESS INDEX m per km/1.0 km section	PRICE ADJUSTMENT
45 or less	0.71 or less	+3.0%
Over 45 to 50	Over 0.71 to 0.79	+2.0%
Over 50 to 55	Over 0.79 to 0.87	+1.0%
Over 55 to 60	Over 0.87 to 0.95	0
Over 60 to 65	Over 0.95 to 1.03	-2.0%
Over 65 to 70	Over 1.03 to 1.10	-4.0%
Over 70	Over 1.10	CORRECTIVE WORK REQUIRED

Price adjustments for each ride smoothness lot will be calculated as follows:

(% Price Adjustment) x (Composite Unit Price of ACHM Surface Course Per Ton [Metric Ton]) x (Tons [Metric Tons] of ACHM in Ride Smoothness Lot)

Where:

$$\text{Tons of ACHM in Ride Smoothness Lot} = \frac{\text{(Lane Width)x(528' Length')x(440 lbs/SY*)}}{\text{9 SF/SY x 2000 lbs/Ton}}$$

$$\text{Metric Tons of ACHM in Ride Smoothness Lot} = \frac{\text{(Lane Width)x(200 m Length)x(240 kg/sq m*)}}{\text{1000 kg/metric ton}}$$

*Note: This is a constant rate for calculating positive and negative price adjustments for all projects.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Table 410-2
Percent Within Limits

Quality Index	PWL for Selected Sample Size		
	n = 3	n = 4	n = 5
0.00	50.00	50.00	50.00
0.01	50.28	50.33	50.36
0.02	50.55	50.67	50.71
0.03	50.83	51.00	51.07
0.04	51.10	51.33	51.42
0.05	51.38	51.67	51.78
0.06	51.65	52.00	52.13
0.07	51.93	52.33	52.49
0.08	52.21	52.67	52.85
0.09	52.48	53.00	53.20
0.10	52.76	53.33	53.56
0.11	53.04	53.67	53.91
0.12	53.31	54.00	54.27
0.13	53.59	54.33	54.62
0.14	53.87	54.67	54.98
0.15	54.15	55.00	55.33
0.16	54.42	55.33	55.69
0.17	54.70	55.67	56.04
0.18	54.98	56.00	56.40
0.19	55.26	56.33	56.75
0.20	55.54	56.67	57.10
0.21	55.82	57.00	57.46
0.22	56.10	57.33	57.81
0.23	56.38	57.67	58.16
0.24	56.66	58.00	58.52
0.25	56.95	58.33	58.87
0.26	57.23	58.67	59.22
0.27	57.51	59.00	59.57
0.28	57.80	59.33	59.92
0.29	58.08	59.67	60.28
0.30	58.37	60.00	60.63
0.31	58.65	60.33	60.98
0.32	58.94	60.67	61.33
0.33	59.23	61.00	61.68
0.34	59.51	61.33	62.03
0.35	59.80	61.67	62.38
0.36	60.09	62.00	62.72
0.37	60.38	62.33	63.07

ARKANSAS DEPARTMENT OF TRANSPORTATION

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JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Table 410-2
Percent Within Limits

Quality Index	PWL for Selected Sample Size		
	n = 3	n = 4	n = 5
0.38	60.67	62.67	63.42
0.39	60.97	63.00	63.77
0.40	61.26	63.33	64.12
0.41	61.55	63.67	64.46
0.42	61.85	64.00	64.81
0.43	62.15	64.33	65.15
0.44	62.44	64.67	65.50
0.45	62.74	65.00	65.84
0.46	63.04	65.33	66.19
0.47	63.34	65.67	66.53
0.48	63.65	66.00	66.88
0.49	63.95	66.33	67.22
0.50	64.25	66.67	67.56
0.51	64.56	67.00	67.90
0.52	64.87	67.33	68.24
0.53	65.18	67.67	68.58
0.54	65.49	68.00	68.92
0.55	65.80	68.33	69.26
0.56	66.12	68.67	69.60
0.57	66.43	69.00	69.94
0.58	66.75	69.33	70.27
0.59	67.07	69.67	70.61
0.60	67.39	70.00	70.95
0.61	67.72	70.33	71.28
0.62	68.04	70.67	71.61
0.63	68.37	71.00	71.95
0.64	68.70	71.33	72.28
0.65	69.03	71.67	72.61
0.66	69.37	72.00	72.94
0.67	69.70	72.33	73.27
0.68	70.04	72.67	73.60
0.69	70.39	73.00	73.93
0.70	70.73	73.33	74.26
0.71	71.08	73.67	74.59
0.72	71.43	74.00	74.91
0.73	71.78	74.33	75.24
0.74	72.14	74.67	75.56
0.75	72.50	75.00	75.89
0.76	72.87	75.33	76.21

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Table 410-2
Percent Within Limits

Quality Index	PWL for Selected Sample Size		
	n = 3	n = 4	n = 5
0.77	73.24	75.67	76.53
0.78	73.61	76.00	76.85
0.79	73.98	76.33	77.17
0.80	74.36	76.67	77.49
0.81	74.75	77.00	77.81
0.82	75.14	77.33	78.13
0.83	75.53	77.67	78.44
0.84	75.93	78.00	78.76
0.85	76.33	78.33	79.07
0.86	76.74	78.67	79.38
0.87	77.16	79.00	79.69
0.88	77.58	79.33	80.00
0.89	78.01	79.67	80.31
0.90	78.45	80.00	80.62
0.91	78.89	80.33	80.93
0.92	79.34	80.67	81.23
0.93	79.81	81.00	81.54
0.94	80.27	81.33	81.84
0.95	80.75	81.67	82.14
0.96	81.25	82.00	82.45
0.97	81.75	82.33	82.75
0.98	82.26	82.67	83.04
0.99	82.79	83.00	83.34
1.00	83.33	83.33	83.64
1.01	83.89	83.67	83.93
1.02	84.47	84.00	84.22
1.03	85.07	84.33	84.52
1.04	85.69	84.67	84.81
1.05	86.34	85.00	85.09
1.06	87.02	85.33	85.38
1.07	87.73	85.67	85.67
1.08	88.49	86.00	85.95
1.09	89.29	86.33	86.24
1.10	90.16	86.67	86.52
1.11	91.11	87.00	86.80
1.12	92.18	87.33	87.07
1.13	93.40	87.67	87.35
1.14	94.92	88.00	87.63
1.15	97.13	88.33	87.90

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Table 410-2
Percent Within Limits

Quality Index	PWL for Selected Sample Size		
	n = 3	n = 4	n = 5
1.16	100.00	88.67	88.17
1.17	100.00	89.00	88.44
1.18	100.00	89.33	88.71
1.19	100.00	89.67	88.98
1.20	100.00	90.00	89.24
1.21	100.00	90.33	89.50
1.22	100.00	90.67	89.77
1.23	100.00	91.00	90.03
1.24	100.00	91.33	90.28
1.25	100.00	91.67	90.54
1.26	100.00	92.00	90.79
1.27	100.00	92.33	91.04
1.28	100.00	92.67	91.29
1.29	100.00	93.00	91.54
1.30	100.00	93.33	91.79
1.31	100.00	93.67	92.03
1.32	100.00	94.00	92.27
1.33	100.00	94.33	92.51
1.34	100.00	94.67	92.75
1.35	100.00	95.00	92.98
1.36	100.00	95.33	93.21
1.37	100.00	95.67	93.44
1.38	100.00	96.00	93.67
1.39	100.00	96.33	93.90
1.40	100.00	96.67	94.12
1.41	100.00	97.00	94.34
1.42	100.00	97.33	94.56
1.43	100.00	97.67	94.77
1.44	100.00	98.00	94.98
1.45	100.00	98.33	95.19
1.46	100.00	98.67	95.40
1.47	100.00	99.00	95.61
1.48	100.00	99.33	95.81
1.49	100.00	99.67	96.01
1.50	100.00	100.00	96.20
1.51	100.00	100.00	96.39
1.52	100.00	100.00	96.58
1.53	100.00	100.00	96.77
1.54	100.00	100.00	96.95

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)

Table 410-2
Percent Within Limits

Quality Index	PWL for Selected Sample Size		
	n = 3	n = 4	n = 5
1.55	100.00	100.00	97.13
1.56	100.00	100.00	97.31
1.57	100.00	100.00	97.48
1.58	100.00	100.00	97.65
1.59	100.00	100.00	97.81
1.60	100.00	100.00	97.97
1.61	100.00	100.00	98.13
1.62	100.00	100.00	98.28
1.63	100.00	100.00	98.43
1.64	100.00	100.00	98.58
1.65	100.00	100.00	98.72
1.66	100.00	100.00	98.85
1.67	100.00	100.00	98.98
1.68	100.00	100.00	99.11
1.69	100.00	100.00	99.23
1.70	100.00	100.00	99.34
1.71	100.00	100.00	99.45
1.72	100.00	100.00	99.55
1.73	100.00	100.00	99.64
1.74	100.00	100.00	99.73
1.75	100.00	100.00	99.81
1.76	100.00	100.00	99.88
1.77	100.00	100.00	99.94
1.78	100.00	100.00	99.98
≥1.79 to 2.65	100.00	100.00	100.00

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT

Section 409.03(h) of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following bullet is added under detailed requirements:

- Broadband Internet Service shall be provided.

  The Broadband Internet Service shall be provided with an Internet Protocol (IP) address which is reachable on the global Internet (public) and which is permanently assigned (static). The Contractor is not required to provide this service if an IP address which is both static and public is not available.

  If this service is not available at the beginning of a project but becomes available during the life of the project, the Contractor shall provide the service immediately from the date of availability.

  The data transfer rate shall be 3 megabits per second (Mbps) download and 500 kilobits per second (kbps) upload, or higher, with latency not to exceed 150 milliseconds. If the Broadband Internet Service meets all of the requirements of this specification except for the data transfer rate and/or latency, then the best performing available connection shall be provided.

  Prior to the selection of the Broadband Internet Service provider, the Contractor shall submit to the Resident Engineer, in writing, the proposed method for providing Broadband Internet Service. The Resident Engineer shall review this submittal and respond in writing regarding the acceptability of the proposed method.

  The Broadband Internet Service shall be provided with equipment providing one Ethernet port.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

WARM MIX ASPHALT

DESCRIPTION: The Department will allow the use of Warm Mix Asphalt (WMA). All provisions for the production and placement of conventional HMA mixtures as stipulated in Section 410 Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses of the Standard Specifications for Highway Construction, Edition 2014, are applicable except as noted below.

Section 410 Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 410.03: Replace the third sentence with "WMA production temperatures at the plant shall be according to the Contractor's approved mix design but may be adjusted based on recommendations of the WMA additive/process manufacturer."

Add the following paragraph: "Implementation of best management practices in the control of aggregate moisture content prior to introduction to the drying or mixing drum is highly recommended in order to achieve the maximum benefit of WMA technology."

Section 410.07: Replace the last sentence of the first paragraph with "Spreading and finishing temperatures shall be according to the Contractor's approved mix design, but in no case shall the WMA be placed at a temperature less than 220° F."

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE

The following is added as the last paragraph of Subsections 501.04(a) and 802.06(a):

If the contractor elects to use Class C fly ash as a partial replacement for cement in Portland Cement Concrete Pavement or in Class S(AE) concrete and the plant producing the fly ash uses powdered activated carbon to meet EPA mercury emission requirements (as indicated in the Qualified Products List), an increased frequency for contractor quality control testing for air content will be required. As a minimum, an air content test must be taken at the beginning of placement and at intervals during placement not to exceed 20 cubic yards for Class S(AE) concrete and 100 cubic yards for Portland Cement Concrete Pavement. The Engineer may require more frequent testing if wide ranges occur in the air content test results. No additional payment will be made for additional air content testing, but full compensation will be considered included in the contract unit prices bid for Portland Cement Concrete Pavement or Class S(AE) Concrete.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

BROADBAND INTERNET SERVICE FOR FIELD OFFICE

Section 602 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added after the first paragraph of **Subsection 602.02(b)**:

Broadband Internet Service shall be provided to the field office where available.

The Broadband Internet Service shall be provided with an Internet Protocol (IP) address which is reachable on the global Internet (public) and which is permanently assigned (static). The Contractor is not required to provide this service if an IP address which is both static and public is not available.

If this service is not available at the beginning of a project but becomes available during the life of the project, the Contractor shall provide the service immediately from the date of availability.

The data transfer rate shall be 3 megabits per second (Mbps) download and 500 kilobits per second (kbps) upload, or higher, with latency not to exceed 150 milliseconds. If the broadband Internet service meets all of the requirements of this specification except for the data transfer rate and/or latency, then the best performing available connection shall be provided.

Prior to the selection of the broadband Internet service provider, the Contractor shall submit to the Resident Engineer, in writing, the proposed method for providing broadband Internet service. The Resident Engineer shall review this submittal and respond in writing regarding the acceptability of the proposed method.

The Broadband Internet Service shall be provided with equipment providing one Ethernet port.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

MAINTENANCE OF TRAFFIC

Section 603 Maintenance of Traffic and Temporary Structures of the Standard Specifications, Edition of 2014, is hereby expanded as follows:

The Contractor shall provide additional traffic control through the project as defined below, in order to provide a safe and convenient traffic flow at all times throughout the limits of each work zone and the approaches thereto.

The Contractor shall assume full responsibility for the safe and efficient movement of traffic through the construction area for the duration of the project. Prior approval by the Engineer shall be required for any alterations of traffic patterns shown on the plans.

All traffic control devices shall be in accordance with the details shown in the plans or on Standard Drawings TC-1, TC-2, TC-3, TC-4, and TC-5. The Contractor will be responsible for furnishing, placing, maintaining, relocating, and subsequent removal of all traffic control devices within the limits of the project.

Except where shown on the plans, there shall be no two-way traffic operations permitted on the main lanes. Interchange ramps shall be kept operational at all times. Except where shown on the plans, work on the main lanes and ramps shall be accomplished in partial widths in order to maintain traffic.

The Contractor shall notify the Engineer a minimum of 5 full business days prior to closing a lane. If the Contractor fails to give the proper notification, the lane closure will not be allowed until 5 full business days after the notification was given.

When closing a lane, a Portable Changeable Message Sign shall be placed in advance of the construction signs advising motorists of the lane closure. Portable Changeable Message Signs shall be placed prior to placement of lane closure signing and at locations as directed by the Engineer.

I-40 Temporary Barrier Wall Installation
Only one (1) lane closure with a maximum work area of 2 miles will be provided for in the plans. The lane closure shall be installed such that it never exceeds the actual work area by more than ¼ mile. The Contractor shall not close any portion of a lane unless active work will begin immediately. In addition, when gainful work is not being accomplished in an area where a lane has been previously closed, steps shall be taken to return traffic to normal conditions - that is, all lanes open to traffic in each direction within 2 hours after construction operations have ceased. All additional labor, materials, and incidentals needed to return the traffic to normal conditions shall be provided, maintained, removed, and replaced, if necessary, at no cost to the Department. Traffic shall not be permitted on any milled surface.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

MAINTENANCE OF TRAFFIC

Failure to comply with this requirement will result in a lane use charge of $11,000 per hour until work begins in the closed lane or the lane closure is removed. A lane closure will not be considered to be removed until all advance warning devices specific to the lane closure have been removed or revised. In assessing this lane use charge any portion of an hour will be counted as a full hour.

The Contractor shall schedule his work so that no main lane closures exist and no work requiring main lane closures will be performed for the time period of the day before the Holiday through the day after the Holiday for the following Legal Holidays:

- New Year's Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day & the Following Day
- Christmas Eve & Christmas Day

If the Legal Holiday is immediately prior to a weekend or immediately following a weekend, the weekend will be considered a part of the Holiday.

In addition, single lane closures of the I-40 main lanes will not be permitted during the following time periods:

- Sunday through Saturday: 6:00 a.m. to 10:00 a.m.
- Sunday through Saturday: 3:00 p.m. to 7:00 p.m.

Failure to comply with this requirement will result in a lane use charge of $11,000 per hour until the lane closure is removed. A lane closure will not be considered to be removed until all advance warning devices specific to the lane closure have been removed or revised. In assessing this lane use charge any portion of an hour will be counted as a full hour.

In addition, double lane closures of the I-40 main lanes will only be allowed when hanging bridge steel and will not be permitted during the following time periods:

- Sunday through Saturday: 6:00 a.m. to 9:00 p.m.

Failure to comply with this requirement will result in a lane use charge of $22,000 per hour until the lane closure is removed. A lane closure will not be considered to be removed until all advance warning devices specific to the lane closure have been removed or revised. In assessing this lane use charge any portion of an hour will be counted as a full hour.

ARKANSAS DEPARTMENT OF TRANSPORTATION

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MAINTENANCE OF TRAFFIC

In addition, single lane closures of the Highway 365 main lanes will <u>not</u> be permitted during the following time periods:

- Sunday through Saturday: 4:00 p.m. to 7:00 p.m.

Failure to comply with this requirement will result in a lane use charge of <u>$500</u> per hour until the lane closure is removed. A lane closure will not be considered to be removed until all advance warning devices specific to the lane closure have been removed or revised. In assessing this lane use charge any portion of an hour will be counted as a full hour.

The Contractor shall schedule and perform the work, including the placement and removal of traffic control devices, to insure that all I-40 traffic lanes are open at all times, with the aforementioned exceptions.

Special events or occurrences could cause traffic to become congested. When this occurs, the Contractor shall immediately modify the work schedule, working methods, or procedures to lessen the impact of the work on traffic or as directed by the Engineer.

The Contractor will regulate the access of work vehicles and equipment to the work area while insuring safety to the traveling public and minimum damage to highway facilities. Any damage to the highway facility or vegetation caused by the Contractor shall be repaired at no cost to the Department. Unless operating within the area closed to traffic, the Contractor's work vehicles shall travel in the direction of the normal traffic flow. Only those vehicles necessary for the work shall be allowed in the work zone. All other vehicles shall be parked at a safe location outside the work zone, as approved by the Engineer.

General equipment storage areas or operations centers will be allowed within the limits of the right of way only where permitted by the Engineer. At the end of the work day, equipment shall be either shielded from traffic by an approved positive barrier or placed so it is not within 30 feet of any lane carrying traffic.

The Contractor shall restrict the crossing of the median to existing interchanges and overpasses. Access to the project shall be limited to existing interchanges.

The Contractor shall conduct his operations so that no equipment or personnel shall occupy any portion of the roadway that remains designated for the passage of traffic.

BASIS OF PAYMENT: There shall be no direct payment for fulfilling the requirements of the Special Provision, but compensation shall be considered included in the price bid for Maintenance of Traffic.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

MAINTENANCE OF TRAFFIC

Traffic control devices, where shown on the plans for payment, will be paid for at the contract unit price for each item involved. All additional traffic control devices beyond the contract amount shall be provided, maintained, and replaced, if necessary, at no cost to the Department.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

SPECIAL SAFETY REQUIREMENTS FOR OVERHEAD SIGNS

DESCRIPTION: This specification covers special safety requirements during the installation of overhead signs and/or structures. These requirements are intended for the safety of both the traveling public and the workers. Any modifications must meet the approval of the Engineer.

GENERAL: Any falsework or construction equipment located on the shoulder and required for erection of the structural steel, or for other activities, shall be protected by the precast barrier shown on Drawing No. TC-4 or by barricades that meet the safety requirements of the Engineer. No equipment or materials will be permitted to be hoisted over traffic. Erection of sign supports and other activities over the lanes of Interstate 40, and Interstate 49 and as specified by the Engineer shall be limited to the hours between 11:00 p.m. and 5:00 a.m. on Sunday through Saturday, but will not be permitted during legal holidays or weekends adjacent to these holidays. The allowable work period may be increased or decreased by the Engineer based upon impact to traffic. During the specified work period traffic may be stopped for short intervals of time, not to exceed 15 minutes, or one lane in each direction may be closed, as approved by the Engineer, in order that the above activities can progress without endangering the traveling public. Between closure periods the roadway must be opened for a sufficient length of time to allow re-establishment of the normal flow of traffic. Time windows are subject to adjustment by the Engineer when necessary to accommodate special events or situations.

The Contractor shall notify the Resident Engineer no less than five (5) business days before any activities that will temporarily or permanently reduce the vertical clearance over Interstate 49 and Interstate 40. Notification is required for each activity that will reduce the previous existing clearance. A minimum vertical clearance of 14’-0” must be maintained during all activities.

The Contractor shall schedule his work so that no main lane closures exist and no work requiring main lane closures will be performed for the time period of the day before the Holiday through the day after the Holiday for the following Legal Holidays:

New Year’s Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day & the Following Day
Christmas Eve & Christmas Day

If the Legal Holiday is immediately prior to a weekend or immediately following a weekend, the weekend will be considered a part of the Holiday.

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The Engineer may limit or not approve closures due to special events or incidents that could cause traffic to become congested. The Contractor shall immediately modify his schedule, working methods or procedures as directed by the Engineer.

No direct payment will be made for this work. It shall be considered subsidiary to the other items in the contract.

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TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES

Section 604 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added as the second paragraph of **subsection 604.03(j)**:

When the condition requiring the sign's message mode ceases to exist, but the need for the sign is anticipated to recur within 72 hours, the sign may be left in place and operated in the caution mode with one of the following series of messages displayed for this interim:

- "Drive Safely" followed by "Buckle Up"
- "Don't Drink and Drive" followed by "Buckle Up"

The Engineer will determine which of the above series of messages will be displayed.

If it is anticipated that the sign will not be required and authorized for use in a message mode within a 72-hour period, it shall be removed to an approved location.

The first paragraph of **subsection 604.04** is deleted and the following substituted therefore:

Traffic control devices designated on the plans or authorized by the Engineer will be measured by the square meter (square foot), meter (linear foot), each, day, or week. The maximum quantities of traffic control devices, other than pavement markings, Advance Warning Arrow Panels and Portable Changeable Message Signs, authorized for payment will be the maximum amounts of each, shown on the plans or authorized by the Engineer, that may be required to be in place at any one time during the construction period.

Subsection 604.04(d) is deleted and the following substituted therefore:

(d) Advance Warning Arrow Panels. Advance Warning Arrow Panels furnished will be measured for payment by the number of days each panel is required and authorized by the Engineer. Payment for a full day will be made for any portion of a day that the panel is authorized and used, but the measurement shall not exceed one per panel in any calendar day. When Advance Arrow Warning Panels are required after the contract time has expired and liquidated damages are being assessed, the Contractor shall furnish such panels at no cost to the Department.

The following is added as **subsection 604.04(e):**

(e) Portable Changeable Message Signs. Portable Changeable Message Signs furnished will be measured for payment by the number of weeks each panel is required and authorized by the Engineer. A "week" is defined as a 7-calendar day period beginning at 12:01 a.m. Monday. Payment for a full week will be made for any portion of a week that the sign is authorized and used in a message mode but the measurement shall not exceed one per sign in any week. No measurement will be made for Portable

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Changeable Message Signs operated in the caution mode at the option of the Contractor as allowed herein. When Portable Changeable Message Signs are required after the contract time has expired and liquidated damages are being assessed, the Contractor shall furnish such signs at no cost to the Department.

The first paragraph of **subsection 604.05** is deleted and the following substituted therefore:

Traffic control devices completed and accepted and measured as provided above will be paid for at the contract unit price bid per square meter (square foot), meter (linear foot), each, day, or week, as applicable for the particular item, according to the following:

The pay item Portable Changeable Message Sign is deleted and the following substituted therefore:

Pay Item	**Pay Unit**
Portable Changeable Message Sign	Week

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CONSTRUCTION PROJECT INFORMATION SIGN

DESCRIPTION: This project includes Construction Project Information Signs to inform the public of pertinent job information. Included in this information is the job number, start date, and estimated completion date. Additional information to be included on this sign can be viewed on the special detail in the plans. Location and quantity of signs for this project is located in the Maintenance of Traffic Details.

MATERIALS: All materials incorporated into the project for this sign shall conform to the specifications pertaining to Signs in Section 604 in the Standard Specifications for Highway Construction and appropriate supplemental specifications. The numerals and letters for both date fields may be placed on separate sign blank material that can then be attached to the larger sign blank or be furnished as sections of reflective sheeting that can be used to overlay a revised date. The dimensions of the letters and numbers shall match the sizes shown in the project's special detail. The sign blank material and reflective sheeting used for the date fields shall be the same types used for the overall sign.

CONSTRUCTION REQUIREMENTS: The start date shown on the sign shall be either the date that work began on an active project or the month during which the Contractor plans to begin work on a new project. The initial estimated completion date to be placed on the sign will be either the completion date shown in the project's CPM schedule or a date based on information provided by the Contractor and agreed to by the Engineer. The Contractor will be required to update the sign's estimated completion date information, Month and/or Year, if and where directed by the Engineer throughout the duration of the project.

The Construction Project Information Sign shall be installed at the same time when all other advanced warning signs are installed on the project. The Contractor will have five (5) business days from the time the Engineer informs the Contractor to update the Estimated Completion Date on the Construction Project Information Sign. Failure to change the date on the sign after five (5) days may lead to the holding of pay estimates until the dates are updated.

METHOD OF MEASUREMENT: Construction Project Information Sign will be measured by the square foot of sign area and will be paid under the contract item "Signs". Construction Project Information Sign Update will be measured by the each, which shall consist of updating the Month and/or Year. Updates that require a change in both the month and year will not be treated separately and shall be paid as a quantity of one (1) each.

PAYMENT: **Construction Project Information Sign**. The contract unit price bid per square foot for Signs shall be full compensation for all materials, labor, equipment, tools, and incidentals necessary for installing, and for maintenance, repair, and removal of the Construction Project Information Signs.

CONSTRUCTION PROJECT INFORMATION SIGN UPDATE. The contract unit price bid for this item shall be full compensation for furnishing and installing the overlay or sign blank insert for updating the Estimated Completion Date, for all materials, labor, equipment, tools, and incidentals necessary for installing and maintaining the date field on the sign. This item will be

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paid each time the Resident Engineer requests an updated date be installed on the Construction Project Information Sign.

Payment will be made under:

Pay Item	**Pay Unit**
Construction Project Information Sign Update	Each

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PIPE CULVERTS

DESCRIPTION: Section 606, Pipe Culverts, of the Standard Specifications shall be expanded to include jacking concrete pipe. The work shall consist of jacking concrete pipe through the existing roadway embankment at the location shown on the plans or as directed by the Engineer.

CONSTRUCTION METHODS: The culvert pipe shall be pushed through the highway embankment in conformity with the lines and grades as shown on the plans or as established by the Engineer. Approved mechanical boring devices shall be used, no hand digging will be allowed.

Reinforced Concrete Pipe Culvert (Class V) of the diameter shown in the plans or as directed by the Engineer shall be used for the jacking installation.

Boring shall be augered progressively ahead of the leading edge of the advancing pipe as spoil is augered or mucked back through the pipe. Annular void and overbreaks shall be minimized by having cutterhead sized closely to pipe diameter and the pipe advanced with cutterhead in close proximity. Overbore should not exceed 5 percent of the pipe diameter. Water used to lubricate or cool bits must be done using a pressure gauge. Water pressure at the bore or auger head shall not exceed 10 psig in the operation.

The Contractor's operations shall be arranged so as to cause a minimum of interference with highway or ramp traffic.

Any damage done to the existing roadway due to the jacking operations shall be repaired by the Contractor at no expense to the Department.

The Contractor will use all precaution to prevent damage to the culvert pipe during the jacking operation and shall replace any damaged sections at his own expense.

Excavated material may be placed in the roadway embankment if approved by the engineer or otherwise disposed of by the Contractor but will in no case be left in piles or in such locations that will obstruct drainage or present an unsightly appearance.

BASIS OF PAYMENT: Payment for fulfilling the requirements of the Specification shall be considered to be included in the price bid for the size and type of pipe culvert designated.

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PLASTIC PIPE

Section 606 Pipe Culverts of the Standard Specifications for Highway Construction, Edition of 2014, is hereby expanded to include the following:

Subsection 606.02(d)(1) is hereby deleted and the following is substituted therefore:

(1) Polyethylene Pipe. The manufacture and furnishing of high density polyethylene pipe ranging in diameter from 18" (450mm) minimum to 48" (1200mm) maximum shall be according to AASHTO M 294, Type S. Polyethylene pipe shall have a corrugated outer shell with an essentially smooth wall waterway. Couplings and fittings supplied or recommended by the pipe manufacturer shall be used.

Subsection 606.02(d)(2) is hereby deleted and the following is substituted therefore:

(2) PVC Pipe. The manufacture and furnishing of PVC pipe ranging in diameter from 18" (450mm) minimum to 36" (900mm) maximum shall be according to ASTM F949, Cell Classification 12454. PVC pipe shall have annular or helical projections or ribs on the outer surface and an essentially smooth wall waterway. Couplings and fittings supplied or recommended by the pipe manufacturer shall be used.

The following is added as Subsection 606.02(d)(3):

(3) Polypropylene Pipe. The manufacture and furnishing of polypropylene pipe ranging in diameter from 18" (450mm) minimum to 60" (1500mm) maximum shall be according to AASHTO M330, Type S Polypropylene pipe shall have a corrugated outer shell with an essentially smooth wall waterway. Couplings and fittings supplied or recommended by the pipe manufacturer shall be used.

Subsection 606.02(k) is hereby deleted and the following is substituted therefore:

(k) Structural Bedding and Structural Backfill for Plastic Pipe Culverts shall meet the requirements for the material shown in the Plans and shall meet the requirements as shown in Subsection 302.02 of these Specifications except that the maximum particle size shall be 1" (25.4mm) for Structural Bedding and 1½" (37.5mm) for Structural Backfill.

Subsection 606.03.(a) second paragraph is hereby deleted and the following is substituted therefore:

Pipe culverts under the roadbed shall be so placed that the minimum depth of cover for pipe of any diameter or type shall be not less than the minimum cover as shown in the Plans, including a minimum of 12" (304.8mm) of pavement and/or base.

The following is added as Subsection 606.03(h):

(h) Acceptance Testing of Installed Polyethylene, PVC, and Polypropylene Pipe. All plastic pipes installed for storm drainage systems shall be tested for acceptance by the Contractor using a method consisting of, but not limited to, the following: electronic deflectometers, video cameras, or go/no-go mandrel. These tests shall be conducted not less than 30 days following installation of the pipe. The Engineer will witness all tests.

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At least 10 percent of the total quantity of each size of plastic pipe installed for storm drainage on the project shall be inspected for deformations using one of the approved methods listed above. The Engineer may select the areas to be tested. If the test indicates excessive deflection in the selected length of pipe, the Engineer may require additional lengths of pipe be tested in increments of 10 percent of the total installed length. Any pipes with a reduced diameter of 5 percent of the actual inside pipe diameter shall be removed and re-laid, if undamaged, or replaced with a new pipe at no cost to the Department. Re-laid pipe and new pipe shall be retested at no cost to the Department.

If the mandrel test is selected, a nine-point mandrel with a diameter equal to 95 percent of the nominal diameter of the pipe shall be used. The mandrel shall be of a shape similar to that of a true circle enabling the gauge to pass through a satisfactory pipeline with little or no resistance and shall be designed to prevent tipping from side to side and to prevent debris build-up from occurring between channels of the adjacent fins or legs. Each end of the mandrel shall have fasteners for attaching pulling cables. The mandrel shall have nine various sized fins or legs of appropriate dimensions for various diameter pipes. Each fin or leg shall have a permanent marking that states its designated pipe size. For acceptance testing, the mandrel must pass through the entire section between manholes or other structures in one pass when pulled by hand without the use of excessive force.

Subsection 606.05(a) is hereby deleted and the following is substituted therefore:

(a) Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot (linear meter) for High Density Polyethylene Pipe, PVC Pipe, or Polypropylene Pipe of the several sizes, which price shall be full compensation for furnishing, hauling, and installing the pipe; for couplers and joints; for furnishing all testing devices, materials, equipment, and labor for testing; for excavation and backfilling, including compacting backfill; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
__" (__mm) High Density Polyethylene Pipe	Linear Foot (Meter)
__" (__mm) PVC Pipe	Linear Foot (Meter)
__" (__mm) Polypropylene Pipe	Linear Foot (Meter)

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METAL PIPE

Section 606 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 606.02(j) **is** hereby deleted and the following is substituted therefore**:**

> **(j)** Structural Bedding and Structural Backfill for Corrugated Metal Pipe Culverts shall be as shown in the Plans and shall meet the requirements as shown in Subsection 302.02 or Subsection 303.02 of these specifications except that the maximum particle size shall be 1/4” (6.4 mm) for Structural Bedding.

Subsection 606.03(a) second paragraph is hereby deleted and the following is substituted therefore:

> Pipe culverts under the roadbed shall be placed so that the minimum depth of cover for pipe of any diameter or type shall not be less than the minimum cover as shown in the Plans, including a minimum of 12” (304.8 mm) of pavement and/or base.

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EXTENSION FOR PIPE CULVERTS

DESCRIPTION: This item consists of extending existing pipe culverts at selected locations designated by the Engineer by retaining the existing pipe culverts and constructing a concrete collar as a waterproof seal connection between the existing and proposed pipe culverts.

MATERIALS: Materials shall conform to the requirements of Section 802 for Class S Concrete, and Section 804 for Reinforcing Steel (Grade 40 or Grade 60), of the Standard Specifications for Highway Construction, Edition of 2014.

CONSTRUCTION REQUIREMENTS: The Contractor shall break the existing headwall down to the top of the existing pipe culvert and excavate the material at the bottom of the existing pipe culverts in such a manner that the existing pipe culverts will experience no damage and can remain in place. After placement of the new culvert, the Contractor shall construct a concrete collar as a waterproof seal connection between the existing and proposed pipe culverts. The method used for forming and placing the concrete collar shall be sufficient to seal the joint from leakage as approved by the Engineer. Adequate vibration shall be applied to the concrete to ensure consolidation. Debris from the broken headwalls shall be removed and disposed of as approved by the Engineer.

BASIS OF PAYMENT: There shall be no direct payment made for fulfilling the requirements of this Special Provision. Payment for work completed and accepted as provided above will be considered included in the price bid for the various contract items.

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CONCRETE WALKS (TYPE SPECIAL)

Section 633 Concrete Walks, Concrete Steps, and Hand Railing of the Standard Specifications, Edition of 2014, is hereby amended as follows:

Subsection 633.02 Materials is expanded to include the following:

Reinforcing steel shall comply with Section 804.

Subsection 633.03(c) Placing and Finishing is modified to include the following:

The first sentence of the third paragraph contains the word “steps” which shall be replaced with “the steps and retaining walls”.

Subsection 633.03(d) Backfilling is expanded to include the following:

The retaining wall shall be backfilled per the requirements in Subsection 801.08 Backfill.

Subsection 633.04 Method of Measurement is expanded to include the following:

The area measured for the Concrete Walks (Type Special) will be that of the concrete walk area only.

Subsection 633.05 Basis of Payment is expanded to include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Concrete Walks (Type Special)	Square Yard (Square Meter)

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ACTUATED CONTROLLER

Section 701 Actuated Controller of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The second paragraph of **Subsection 701.02 Materials (a) General** is hereby deleted and the following substituted therefore:

> Prior to the ordering of all traffic signal equipment, the Contractor shall submit to the Engineer two (2) printed copies of the applicable brochures containing the design criteria for the equipment which the Contractor proposes to install for approval. The specific items that are proposed for use shall be clearly marked in the applicable brochures. A list shall be attached to identify the item and contain the manufacturer, quantity, model, and identifying descriptions of each item. Adequate engineering data, essential shop drawings, and schematic diagrams shall be provided for review. Partial submittals will not be accepted for consideration and shall be returned for correction without review.
>
> 1. **Review.** For all traffic signal equipment submittals, the Engineer's review of the equipment submittals should be completed within thirty (30) days from the date of the submission unless otherwise specified. Once the Engineer has determined that the equipment submitted meets the design criteria, a written approval will be provided, in which no further action is required. If equipment submitted for use is rejected, the Contractor shall re-submit the equipment for review within fifteen (15) days of notification of equipment rejection. Resubmittal of rejected equipment for review will be considered the starting point of a new approval cycle as described.

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CABINET DRAWER ASSEMBLY

Section 701 Actuated Controller of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 701.02 (d) (10) Wiring Diagrams and Controller Manual is hereby deleted and the following substituted therefore:

> Three copies of the Cabinet Wiring Diagram and one copy of the controller manual shall be supplied with each cabinet. One diagram and the manual shall be placed in the "Cabinet Drawer Assembly". The "Cabinet Drawer Assembly" shall be fabricated to the approximate dimensions shown on the plans. Included with the "Cabinet Drawer Assembly" will be all hardware necessary to fasten and install the Assembly to the underside of a cabinet shelf roughly at the midpoint of the Cabinet vertically. One diagram shall be delivered to the City or County before final inspection of the intersection. One diagram shall be given to the Engineer.
>
> The "Cabinet Drawer Assembly" shop drawing shall be included in the traffic equipment submittal.

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PORTABLE TRAFFIC SIGNAL SYSTEM

1. **DESCRIPTION.** This item shall consist of furnishing and installing at locations shown on the plans or as directed, a Portable Traffic Signal System. All requirements of Standard Specifications for Highway Construction, Edition of 2014, shall apply. Portions of the standard specifications may be superseded by these special provisions.

   A. General. This specification outlines an operationally independent self contained system for temporary traffic control. Included are the specifications for the portable mast arm trailer, the traffic control unit with cabinet and terminal facility, vehicle actuation, wireless communications, solar system for battery charging, battery system and other ancillary equipment necessary to provide a complete working system.

   B. Functional. The system shall include, as a minimum, the following features:

   (a) Mast Arm Trailer:

   The unit shall be a towable, trailer mounted, hydraulically lifted mast and arm. It shall have two (2) 12 inch, 3 section traffic signal heads with (optional) back-plates. The unit shall include a battery powered hydraulic pump for raising and lowering the arm. Lifting mechanisms using cable, winches, or linear actuators are not acceptable. The chassis of the unit shall provide multiple points at which auxiliary equipment may be mounted. The trailer shall have 15 inch wheels; fenders, and standard DOT required trailer lights. The unit shall have a drop tongue that can be hinged down and locked toward the ground as well as be removable. The tongue shall be provided with a standard 2” inch ball hitch. There shall be 2000 lb capacity extendable leveling jacks at each of the four corners of the trailer. In the folded position, the unit less the hitch shall not exceed the following over-all dimensions: 84” width, 150” length, or 114” height. The removable hitch will typically extend 56 inches in front of the trailer. In the horizontal position, the trailer mast arm shall have a fixed 9’ reach from the side of the trailer and give a minimum of 17’ feet clearance over the baseline established by the jacks. A lock or fixed mechanism shall keep the arm from lowering once the reach is established. With two ITE approved 12” 3-section signals in place: one at the outer end of the arm, the other mounted on the vertical mast, each equipped with optional back-plates and tunnel visors. The unit shall withstand 80 mph wind gusts. The wind gust rating assumes that the entire weight of the unit is carried by the jack stands, that the unit is level, and that the jack stands are on clean, dry pavement. The chassis and mast shall be labeled to designate pinch points, electrical hazards and overhead power line cautions. There shall be an electrical grounding lug provided to terminate to a user supplied driven electrical ground. The primary pivot point of the mast, when fully extended, shall have a positive mechanical lock to ensure that the mast remains upright. All other joints and extensions of the mast or arm shall have positive mechanical locks or pins to prevent the collapse or unauthorized movement or dismantling of the mast or arm. The unit shall have a receiver type hitch in the rear, enabling a receiver tube to be installed for towing multiple units in tandem. The unit shall include a rear electrical receptacle for

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plugging in lights from a 2nd unit for tandem towing. The hydraulic pump shall power the mast in both up and down directions. The pump flow shall be restricted to limit the maximum speed of travel of the arm to a safe speed. Operator safety shall be enhanced by the use of a nonconductive pendant to operate the pump via a minimum 6' long cable, allowing the operator to step away from the trailer so that he can clearly watch the mast as it rises to observe for power lines, traffic or other obstructions. The hydraulic pump and pump battery terminations shall be housed in a lockable enclosure. The unit shall be powder coated a highway safety orange, and have reflective decals placed appropriately to meet DOT requirements for where used. The unit shall have an axle and suspension rated adequately to handle the overall trailer weight. Trailers that have a gross weight over 3,000 lb, shall be equipped with trailer brakes. The system shall comply with the requirements for Portable Traffic Control Signals as defined in the Federal Manual of Uniform Traffic Control Devices (MUTCD), Part IV, 4D, including specifically the requirements pertaining to signal heads, lamps, spacing of signals, clearance, and number of signal faces. For optimizing signal viewing, signal mountings shall allow a 180 degrees' vertical axis of rotation and adjustments also for up and down alignments. The system shall be delivered with matching key padlocks for all the enclosures.

(b) Emergency Portable Mast Arm Knock-Down Capability:

Each independent portable signal trailer shall have the capability to flash yellow or red or be used as a "knock down" replacement portable mast arm, independent of other trailers. In this case the control system shall enable external AC signal inputs to run the LED signal heads independent of the normal control system.

(c) Traffic Signal Timer Controller:

The controller shall conform to NEMA TS-1 controller functionality and shall be menu driven through a menu driven display and keypad. The display shall be able to show programming parameters, and real time operational parameters not limited to each timing interval being timed including green min, green max, green extensions, yellow, and red as well as which phase is being timed. Standard traffic signal nomenclature shall be used, making the assumption that a movement of traffic is a phase and that individual parts of the phases timing are intervals. The controller shall have a minimum 8 phase controller functionality and shall have a minimum of 6 output circuits at each master or remote location. If the trailer signal outputs are DC for DC LED signal heads, provision shall be provided for running the DC signal heads from an AC signal source. The traffic controller shall have the following additional features:

- **GREEN RECYCLE:** The controller shall be set up to enable a "recycle" in the middle of the "all red clearance" time when the phase just clearing is headed toward a red rest but receives a vehicle call and there is no other phase receiving a call to service. When this controller is being operated in an actuated mode, this

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feature shall time an adjustable time interval, typically 5 seconds, before engaging the recycle. The recycle when activated recycles back to green of the last phase serviced, cutting off the remaining “all red time”. (This is sometimes called “green revert”.) In no case would the recycle be activated if vehicle calls (or any type of call to service) remain on any other phases. The all red time related to each phase using the “green recycle” is effectively made up of two timing intervals, the first a minimum 0-25.5 second interval and the second an interval of minimum 0-255 seconds.

- **CONTROLLER MEMORY:** The controller shall have the ability to register and retain a vehicle call on any designated phase if the vehicle call was made at the time when the clearance intervals were initiated. This is to insure that the phase is serviced at the next appropriate place in the controller phasing, reducing the likelihood of traffic being trapped in the “detection zone”. The controller and power systems shall have adequate over current protection using breakers or fuses. Fuses shall be industry standards if used.
- **CONFLICT MONITOR:** The conflict monitor shall conform to minimum NEMA TS1 monitor functionality. Monitors shall be factory tested before installation. A multiple trailer signal system consisting of master-secondary arrangements shall, by design, remain inoperable unless the conflict monitor is installed. Provision shall be made in the monitoring system to accommodate different phasing and numbers of remote trailers. It shall also be able to monitor 5 section heads. Monitoring shall be done according to standard permanent signal conventional functionality except for having connections being made wireless through the radio system.
- **MODES OF FAILURE:** If the conflict monitor orders a fail mode, the traffic signals shall display a default flashing red (also programmable yellow, steady yellow and steady red) at both ends of the work zone. If there is a loss of power, the traffic signals shall be dark on the trailer affected and the traffic signals on the other trailer shall flash. The monitoring system shall be able to detect the difference between soft and hard fail conditions. If enabled, soft fail conditions such as loosing the radio signal shall enable the system to restart if and when the soft fail condition is corrected.
- **I/O MAPPING:** The controller system inputs and outputs shall be map able. This shall as a minimum enable detector and phase assignments to be changed.
- **VEHICLE ACTUATION:** The system shall be able to run in pre-timed, actuated or semi-actuated modes. This shall be programmable through the keyboard. Each unit (Master and Secondary) shall have a non-intrusive vehicle detector mounted on its mast arm, which shall require no pavement cuts or any connection to the pavement. The detector shall be capable of covering one or more lanes and have a detection range of up to 200 feet for cars and trucks, assuming straight, level pavement. Other optional detection systems shall be

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compatible with system inputs.

- **PREEMPTION:** The control system shall be able to accommodate the addition of preempt inputs. The preemption programming shall be as typical for permanent traffic signal equipment.
- **TIME BASE COORDINATION:** The controller shall have an internal time clock and internal time base coordination. It shall have the optional capability to coordinate into existing traffic systems.

(d) Wireless Communication/Interconnection

The following shall be the minimum common requirements for the Wireless Transceiver. It shall:

- Operate in license-free, Spread Spectrum bands (902-928 MHz) utilizing Frequency Hopping.
- Be capable of maintaining wireless communication in all types of terrain without direct line of sight.
- Operate multiple user-selectable non-overlapping hopping patterns.
- Be completely configurable via the provided menu driven display/keypad.
- Provide Bi-directional radio transmission with confirmation.
- Real time' data transfer ensuring multiple transfers of data with error checking for live monitoring.
- Have LED indicators for PWR/RF Link Status.
- Have an operating temperature of -40 to +80 degrees C.
- Operate within the full operating voltage ranges of the DC system.
- Programmable RF output levels of 1 mW, 10 mW, 100 mW or 1 Watt c/o supplied operator interface.
- Operate as Master, Remote, or Repeater.
- Have RSSI signal strength indicator LEDS.
- Allow firmware updates c/o industry standard port.

(e) Radio Remote for Flagger or Pilot Car Control:

A hand held remote pendant shall be provided that can be used to increment the signals. Provision shall be provided to prevent the overriding the clearance times. It shall have a display showing the status of the trailer system signal indications. It shall be powered by a standard 12VDC cigarette lighter plug.

(f) Cabinet Requirements:

The radio, monitoring and control equipment shall be enclosed in a weather tight enclosure of NEMA 3R standards. It shall also contain a battery charger (120VAC input) and charge controller. The bottom of the cabinet shall have a spring loaded trap door access hole for running a power cord into the battery charger.

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(g) Signals:

The system shall be designed to use LED traffic signal heads. In a fail mode the signal system shall be programmable for flash or steady, and yellow or red color.

(h) Batteries:

The batteries shall be a deep cycle lead acid absorbed glass mat (AGM) type. They shall be hermetically sealed and shall be maintenance free. Batteries shall be housed in enclosure(s) secure from vandalism, theft, and weather. The enclosure(s) shall also keep the batteries securely in place during transport. Battery capacity on the Master and Secondary trailer shall be adequate to allow up to 21 consecutive days of operation without any additional charging.

(i) Solar Charging Option:

Each unit (Master and Secondary) shall have adequate solar charging capacity to insure that each can operate independently of line power or auxiliary charging devices for a minimum of the six best solar months in the 48 contiguous states of the United States. The solar array on each unit shall be capable of tilt adjustment on 2 axis in order to maximize the efficiency of the solar panels. The panels shall be fastened in a secure manner. Panel mounting hardware shall use high security bolt heads. The solar arrays shall be capable of being stowed in a manner so that they are entirely within the boundaries of the framework of the trailer, and minimize wind resistance when the trailer is towed.

(j) Battery Charger:

A 120VAC battery charger shall be provided for the instance when batteries need to be charged from an external source. It shall be rated at a minimum wattage of 360 watts.

(k) Charge Controller:

A charge controller shall be provided for interfacing between the solar panels, the control system, and the batteries. Any combination shall be able to be used simultaneously. It shall be maximum power point tracking, multiple stage and configurable to optimize charge parameters, battery temperature and AGM battery superior charge parameters. The charge controller shall be rated to handle the solar system maximum outputs. It shall have current limiting. It shall have a digital display to monitor charge performance.

(l) System Capabilities:

These trailer systems shall be able to be used within larger, compatible, portable traffic equipment and systems. The radio and control system shall be able to work

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PORTABLE TRAFFIC SIGNAL SYSTEM

within larger systems that have greater phasing capabilities, more complex deployments and larger power consumption needs such as 5 section head left turn movement, or side street signals and system with longer mast arms.

2. **MATERIALS AND CONSTRUCTION.** The Portable Traffic Signal System shall be furnished and installed at the site as indicated on the plan sheet(s). All materials and labor shall be considered included in the price for the Portable Traffic Signal System. Where specified as "actuated" vehicle detection as described elsewhere in this specification shall be furnished, installed and tested.

3. **METHOD OF MEASUREMENT.** Completed and accepted items Portable Traffic Signal System shall be measured by the unit.

4. **BASIS OF PAYMENT.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid as follows:

   Price bid for **Portable Traffic Signal System** including vehicle detection system and associated equipment shall be full compensation for furnishing the equipment; installing and testing the system; maintenance of the equipment for the duration of the project; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

   Payment shall be made under:

Pay Item	**Pay Unit**
Portable Traffic Signal System - Actuated	Lump Sum

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ANTENNA SUPPORT

1. **DESCRIPTION**. This work consists of furnishing all materials, constructing and erecting an antenna support in accordance with the plans and specifications.

2. **MATERIALS.** Pole may be of either steel or aluminum. Pole may be either round tapered, multisided tapered, or as required by the Plans. Pole and hardware, unless superseded by this special provision or the detail sheet(s), shall meet the minimum requirements under the Standard Specifications for Highway Construction, Edition of 2014.

   Section 714 Traffic Signal Mast Arm and Pole with Foundation of the Standard Specifications for Highway Construction, Edition of 2014, shall apply to all units of steel design as well as hardware for units of other material.

   Section 724 Overhead, Bridge Mount, and Cantilever Sign Structure of the Standard Specifications for Highway Construction, Edition of 2014, shall apply to poles and mast arms for units of aluminum design.

   Aluminum alloy surfaces contacting concrete foundations and steel surfaces shall be coated with or bedded in, an aluminum caulking compound such as alumilastic or other suitable material approved by the Engineer.

3. **CONSTRUCTION REQUIREMENTS.**

   A. **Structural Design.** Structural design must be certified by a registered engineer representing the manufacturer to conform to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 4th edition (2001) with 2003 and 2006 interims. As a minimum, the diameter of the lower end of the shaft shall not be less than 8.0 inches with taper to a diameter of at least 3.4 inches at the top. Poles may be two-piece, slip-fitted of adequate design.

      Nut Covers - required for "shoe base" only.

      Hand Hole, **Size (Inside Dim.)** – 4 in. width x 6 in. height.

      Anchor Bolts. Anchor bolts shall be of sufficient size and strength, and meet the requirements of **Section 714 Traffic Signal Mast Arm and Pole with Foundation** of the Standard Specifications for Highway Construction, Edition of 2014.

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ANTENNA SUPPORT

B. Transformer Base. Where designated in the Unit Items as "T-Base", a transformer base shall be furnished and installed as per manufacturer's recommendation. Unless otherwise specified, transformer base is not required to be of breakaway design. Transformer base shall be permanent mold casting of Aluminum Alloy 356-T6 or equal as specified by the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 4th edition (2001) with 2003 and 2006 interims. Bases shall be a minimum of 16 inches high and basically square in cross section. The dimensions shall be approximately those dimensions shown on the plans. Any change in dimension, approved by the Engineer, shall not lessen the design load strength of the base.

A detail sheet illustrating the proper installation of the transformer base shall be supplied to the Department.

Poles not requiring “T-Base” shall be designated in the unit items as "Shoe Base".

C. Foundation. The design of the foundation shall meet the design requirements for the drilled shaft foundation dimensions and reinforcing given in the plans and on Standard Drawing SD-1 (Antenna Pole).

4. METHOD OF MEASUREMENT. Work completed and accepted under this item shall be measured by the unit. Pole "Base" shall refer to the requirement to furnish either T-Base or Shoe Base meeting the requirements of this special provision and all associated hardware and wiring. Height (Ht.) shall refer to the nominal height of the pole including base.

5. BASIS OF PAYMENT. Equipment and labor supplied under this item shall be measured separately by the unit; which price shall be full compensation for furnishing and installing the pole and T-Base (where required); for excavation, backfill, compaction, and removal of surplus material; for furnishing and placing reinforcing steel and concrete; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Antenna Support (Shoe Base, _____’ HT.)	Each

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LOCAL RADIO WITH ANTENNA RELOCATION

DESCRIPTION. This item consists of removing and reinstalling an existing local radio and radio communications antenna as shown on the plans and/or as directed by the Engineer. Antenna orientation is to be adjusted to optimum transmission or reception. This item shall consist of furnishing all materials, equipment, tools and labor necessary and modifying a temporary traffic signal control cabinet to operate as indicated on the plan sheets.

MATERIALS. The mounting bracket and all other equipment and incidentals necessary to install the radio and mount the antenna may be reused. If not, a new mounting bracket shall be used. Antenna cable required for relocation of the antenna shall be paid for separately.

CONSTRUCTION REQUIREMENTS. Contractor shall adjust the heavy duty mounting bracket that is included with the existing antenna to obtain proper orientation. Splicing of antenna cable is not allowed. The contractor shall make all modification to the controller cabinet and intersection wiring necessary to accommodate entrance and wiring of the facilities. This includes wiring in place any additional wiring harnesses necessary to accommodate new or modified equipment and removing designated equipment from the cabinet

METHOD OF MEASUREMENT. Local radio with antenna relocation shall be measured by the unit price bid per each.

BASIS OF PAYMENT. Work completed, accepted and measured as provided above will be paid for at the contract unit price bids for each Local Radio with Antenna Relocation which price shall be full compensation for furnishing all equipment required: mounting, wiring and testing: and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Local Radio with Antenna Relocation	Each

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SYSTEM LOCAL CONTROLLER

1. **DESCRIPTION.** This item shall consist of furnishing and installing at locations shown on the plans or as directed, **System Local Controller** with communications interface for both **IP Addressable Ethernet** as well as **RS 232 Serial Radio** and other associated equipment**,** to operate as part of and existing traffic-responsive, coordinated traffic control system with either closed loop master or centralized server. All requirements of Standard Specifications for Highway Construction, Edition of 2014, **Division 700 Traffic Control Facilities**, and specifically **Section 701 Actuated Controller**, shall apply. Portions of the standard specifications may be superseded by these special provisions.

   A. **General.** The existing system consists of an **Eagle Centralized TACTICS Server** traffic controls system with communications utilizing **Simrex DataMover SS-900 radios.** The traffic operations system software is currently licensed to the City and to the State. All equipment shall be completely compatible with the existing traffic control coordination system hardware and software.

2. **MATERIALS AND CONSTRUCTION.** (Other Special Provisions in this contract may also apply). The cabinet facilities and installation, in addition to standard requirements for **Section 701 Actuated Controller**, shall incorporate the provisions listed in this special provision in order to accomplish the following:

   A. **System Local Controller and Conflict Monitor.** Where specified as “TS2-Type 2 E-Net” unit shall utilize SDLC Port and Malfunction Management Unit (MMU) in monitoring for conflict display at the intersection. Where specified as type “TS1” unit shall include SDLC port but be set up in the TS1 mode and utilize a NEMA Standard 12 Channel Monitor. Unit shall have the capability of monitoring intersections utilizing the latest’s proposed operation of “Flashing Yellow Arrow” (FYA) display.

   B. **Expandability.** All traffic controllers (timers) shall be not less than 8 Phases. This does not apply to cabinet facilities and conflict monitor which shall conform to the summary of quantities or other provisions in this contract. Detector wiring harnesses or rack mount detector channel slots shall, as a minimum, be wired for future connection for the number of phases as described in the Summary of Quantities or plan sheets (whichever is greater); for a minimum of 8 system detectors; or as governed by other provisions in this contract.

   C. **Communications.** Equipment supplied on this contract shall consist of Simrex DataMover SS-900 radios with all necessary equipment to communicate with the existing system and be fully compatible with the existing server and existing radio communications system.

      1. Radio shall meet the following requirements:

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SYSTEM LOCAL CONTROLLER

Radio Parameters	Radio Requirements
Frequency	902 – 928 MHz
Range	5 Miles
Interface	RS-232
LED indicator for Sync	Yes
Output Power	1.0 Watt
Input Power	Voltage: 6 to 30 DC
Data Characteristics	Selectable 1,200 thru 19,200 bps
Receiver Sensitivity	-108 dBm or better
Operating Temperature	-40° C to 70° C
Relative Humidity	5% to 95% (Non-condensing)
Repeat Capabilities	Store and Forward Repeater Capabilities
Operating Modes	Point-to-Point Point-to-Multipoint Half or Full Duplex
FCC Approval	FCC Part 15.247 No License Requirements

The radio shall be supplied with diagnostic software which shall be used to test the link between the master radio and the remote radio. The software shall detect channels which are not adequate for the transmission of data, and program the exclusion of these frequencies in the selection of frequencies to be scanned. Two sets (not photo copies) of the complete manufacturer specifications and programming manual for the type of radio shall be provided, one copy to the City or County and one copy to the Department's Maintenance Division.

2. Antenna shall meet the following requirements:

Antenna Parameters	Antenna Requirements
Remote Site	Unidirectional (Yagi), Minimum 10dB gain
Range	5 Miles
Impedance	50 Ohm
Wind Rating	Minimum: 100 miles per hour
Connectors	Type "N" Female

Two sets (not photo copies) of the complete manufacturer specifications for the type of antenna shall be provided, one copy to the City or County and one copy to the Department's Maintenance Division. Specifications must include the exact gain for the antenna. Complete mounting hardware shall be included.

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3. Antenna Cable shall meet the following requirements:

Antenna Cable Parameters	Antenna Cable Requirements
Nominal Impedance	50 Ohm
Max Antenuation	2.5 dB/100 feet at 900 MHz
Connectors	Type “N” Male
Cable Spec.	Type 6
Cable Length	< 100 feet
Nominal Diameter	< 0.590 inches
Jacket Type	PE (polyethylene)
Shield Type	Aluminum Tape/Tinned Copper Braid
Inner Conductor Type	Bare Copper Clad Aluminum
Approved or Equal	LMR 600

The antenna cable jacket shall be properly sealed at antenna to prevent entrance of water. Cable shall be supported in accordance with manufacturer’s recommendation. Contractor should refer to detail sheets for minimum requirements.

Prior to connection and activation of radio, contractor shall perform test to determine the reflected power from the cable/antenna system. This shall be measured as the “Percent Reflected Power” (∅) where:

TX = TRANSMITTED POWER
RX= REFLECTED POWER
∅ = (RX/TX) *100
VSWR = $(1+\varnothing^{1/2})/(1-\varnothing^{1/2})$

The test shall be performed by the contractor in the presence of the Engineer or his representative. Test equipment shall be as approved by the Department’s Maintenance Division. Where test equipment is to be provided on this contract, it may be utilized by the contractor to perform the required test prior to turning the equipment over to the Department. Contractor shall make all adjustments necessary to antenna system, which may include replacing antenna cable or other equipment, as necessary to bring system within acceptable standards.

Antenna cable for Local Radios is determined by the distance from the radio connection to the base connection on the antenna (Length). Cable type is typically designated on the plan sheet.

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SYSTEM LOCAL CONTROLLER

4. Lightning Protection shall meet the following requirements:

Lightning Protection Parameters	Lightning Protection Requirements
Frequency Range	DC – 1.5 GHz
VSWR	1.1:1 Max to 1000 MHz
Power Capacity	50 Watts @ 900 MHz
Insertion Loss	< 0.1 dB
Slow Rising DC	Voltage: 600 DC
At. 5 KV/uSec	2000 V
Current Surge	50,000 Amps. Max.
Insulation Resistance	100 M. Ohms (Voltage: 100 DC)

D. Installation. The unit shall be installed inside the cabinet with the local controller unless otherwise approve by the engineer. Installation shall include the radio, antenna, coaxial cable, connectors, lightning protection, wiring harness, and all incidental equipment, tools, and labor necessary to connect the unit with the controller.

E. Controller Manuals and Documentation. All documentation and software shall be provided a minimum of 14 calendar days before commencement of the 30-day trial period. The 30-day trial period will not start until this as well as other requirements for system operation have been met. Controller manuals (software and software manuals), must be provided 14 calendar days prior to placing intersection into operation.

Two sets (no photo-copies) of controller manuals shall be provided, one copy to the City or County and one copy to the Department's Maintenance Division.

F. System Timing and Operation Test. The 30-day performance test shall not commence on any portion of the system until all test have been performed by the contractor to the satisfaction of the Engineer in the presence of the Department. Timing data will be provided by the Department's Maintenance Division. The contractor shall give the Engineer a minimum of 14 calendar days' notice to requiring timing data for testing and setup. Contractor shall be responsible for verification that data provided shall be functional and shall notify the Department's Maintenance Division of any changes necessary prior to installation.

In the event that the contractor is not qualified to perform these test and verification, he will be responsible for seeing that a manufacturer's representative is present on the day of testing.

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SYSTEM LOCAL CONTROLLER

3. **METHOD OF MEASUREMENT.** Completed and accepted items will be measured as follows:

   A. System Local Controller will be measured by the unit.

   B. Local Radio with Antenna will be measured by the unit.

   C. Antenna Cable of the type specified will be measured by the linear foot.

4. **BASIS OF PAYMENT.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid as follows:

   A. System Local Controller - Price bid for system local controller and associated equipment of the phases specified, shall be full compensation for furnishing all equipment for providing the foundation, and mounting the cabinet; for installing, wiring and testing the controller and communications unit; for excavation and backfilling; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

   B. Local Radio with Antenna - Price bid for Local Radio with Antenna shall be full compensation for furnishing the radio, supplying the antenna, cable and wiring, mounting, lightning protection, and testing the system; and for all equipment, tools, labor, and incidentals necessary to complete the work

   C. Antenna Cable (Type __) - Price bid for Antenna Cable of the type specified shall be full compensation for furnishing, installing and testing the cable; and for all equipment, tools, labor, and incidentals necessary to complete the work.

   Payment shall be made under:

Pay Item	**Pay Unit**
System Local Controller TS 2-Type 2, (___ Phases)	Each
Local Radio with Antenna	Each
Antenna Cable (Type __)	Linear Foot

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RELOCATION OF TRAFFIC SIGNAL HEAD

DESCRIPTION. This item consists of removing and reinstalling a mast arm pole mounted signal head as shown in the plans or as directed by the Engineer.

MATERIALS. Contractor shall be paid the unit price bid for furnishing and installing signal cable necessary for relocation of the designated signal head.

CONSTRUCTION REQUIREMENTS. Contractor shall be allowed to splice signal cable inside pole bases. A separate multiple conductor traffic signal cable shall be installed from the pole base to each signal head on the pole unless otherwise directed.

METHOD OF MEASUREMENT. Signal head relocation shall be measured by the unit.

BASIS OF PAYMENT. Work completed, accepted and measured as provided above will be paid for at the contract unit price bid for each signal head removed and reinstalled; which price shall be full compensation for furnishing equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Relocation of Traffic Signal Head	Each

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JOB NO. 080457

RETROREFLECTIVE BACKPLATES

Section 706 Traffic Signal Head of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The ninth paragraph of **Subsection 706.02 Materials (c) Housing** is hereby deleted and the following substituted therefore:

> Visors and backplates for metal signal sections shall be made from 0.050" (1.25 mm) minimum thickness aluminum alloy sheet.
>
> - The minimum thickness of 0.050" does not include the retroreflective border.
> - Backplates shall not be flexible nor of the hinged design.
> - The backplate shall be louvered.
> - A louvered backplate shall include louvers with no louvers closer than 0.5" from the inner or 2.5" from the outer edge. Sides are defined on how the signal head is oriented in the plans.
> - The backplate shall have a 2" wide yellow (non-fluorescent) retroreflective sheeting border, placed flush with the outer edge of the backplate and placed no closer than 0.5" from all louvers. No sheeting is allowed over any louvered area.
> - Sheeting shall be applied in such a manner to provide wrinkle and bubble free surfaces. Application of sheeting shall be in accordance with this special provision otherwise will be cause for rejection of materials due to workmanship.
> - The sheeting shall be Type VIII or Type IX in accordance with ASTM D4956 or ASTM D4956-05 and listed on ARDOT's qualified product list.
> - All applicable brochures containing the design criteria for the retroreflective sheeting border shall be submitted by the Contractor for approval.
> - The sheeting shall be applied in the orientation for the maximum angularity according to the manufacturer's recommendations to project rectangular appearance at night.
> - All backplates types shall be securely attached to the signal-head as recommended by the manufacture's specifications and methods.

The tenth paragraph of **Subsection 706.02 Materials (c) Housing** is hereby deleted and the following substituted therefore:

> Visors and backplates for plastic signal faces shall be either formed from sheet plastic or assembled from one or more injection, rotational, or blow molded plastic sections with a minimum thickness of 0.10" (2.5 mm).
>
> - The minimum thickness of 0.10" does not include the retroreflective border.
> - Backplates shall not be flexible nor of the hinged design.
> - The backplate shall be non-louvered.

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RETROREFLECTIVE BACKPLATES

- The backplate shall have a 2” wide yellow (non-fluorescent) retroreflective sheeting border, placed flush with the outer edge of the backplate.
- The sheeting shall be Type VIII or Type IX in accordance with ASTM D4956 or ASTM D4956-05 and listed on ARDOT’s qualified product list.
- All applicable brochures containing the design criteria for the retroreflective sheeting border shall be submitted by the Contractor for approval.
- The sheeting shall be applied in the orientation for the maximum angularity according to the manufacturer’s recommendations to project rectangular appearance at night.
- All backplates types shall be securely attached to the signal-head as recommended by the manufacture’s specifications and methods.

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LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

1. **DESCRIPTION.** This item shall consist of furnishing and installing Countdown Pedestrian Signal Heads and components based on Light Emitting Diode (LED) technology according to these specifications as well as **Section 707 Pedestrian Signal Head** of the Standard Specifications for Highway Construction, Edition of 2014, subject to approval of the engineer. The basic configuration consists of the "filled", symbolic single section design. Portions of the standard specifications will be superseded by these special provisions.

2. **MATERIALS.** The LED modules shall be suitable for span wire and mast arm mounted signals. Units must meet the following specifications to be accepted.

   (A) Physical and Mechanical. LED pedestrian signal modules designed shall not require special tools for installation. Retrofit replacement LED signal modules shall fit into existing pedestrian signal housings built to the VTCSH Standard without modification to the housing. Installation of a retrofit replacement LED signal module into an existing signal housing shall only require the removal of the existing optical unit components, i.e., lens, lamp, and gaskets; shall be weather tight and fit securely in the housing; and shall connect directly to existing electrical wiring utilizing spade connectors. It shall not be necessary to remove reflector or lamp module. Reflector and lamp module is not required where new housings are provided.

   The countdown feature will be displayed only during the flashing "Don't Walk" segment of the pedestrian phase. This feature should be able to restart at the correct part of the signal cycle after a power outage or a signal pre-emption has been activated.

   (B) Optical Requirements. The modules shall be measured per ITE specifications, and are required to meet luminous values that are a minimum of 115 percent greater than the required minimum values in the specifications at the time of production. The YELLOW modules shall be tested for luminous output at 25°C, allowing the modules to achieve thermal equilibrium for 60 minutes, while the modules are energized at nominal operating voltage, at a 8.3% (or 1/12) duty cycle or 5 sec on/55 sec off). The yellow modules shall meet all other ITE specifications.

   (C) Optical Unit. LED signal modules shall meet the following requirements:

   Optical Unit Replacement - The LED module shall be constructed to allow the replacement of the outer lens and/or the light engine when needed.

   Lens Surface - The external lens shall be smooth on the outside to prevent excessive dirt/dust buildup.

   Chromaticity - The measured coordinates of LED signal modules shall conform to the chromaticity requirements of Section 8.04 and Figure 1 of the VTCSH standard.

   Environment - The LED signal module shall be rated for use in the ambient operating temperature range, measured at the exposed rear of the module, of -40° C (-40° F) to +74°C (+165° F). The LED sign module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991, sections 4.7.2.1 and

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LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

4.7.3.2, for Type 4 enclosures to protect all internal LED, electronic, and electrical components. The LED signal module lens shall be UV Stabilized.

Pre assembly - The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing pedestrian signal housing. The power supply for the LED signal module may be either integral or packaged as a separate module. The power supply may be designed to fit and mount inside the pedestrian signal housing adjacent to the LED signal module. The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

LED Drive Circuitry (parallel) - The individual LED light sources shall be wired so that a catastrophic failure of one LED light source will result in the loss of only that one LED light source, and the loss of no more than 1% of the total LED'S within the LED signal module.

Material Composition - Materials used for the lens and signal module construction shall conform to ASTM specification for the materials where applicable. Enclosures containing either the power supply or electronic components of the signal modules shall be made of UL94VO flame retardant materials. The lens of the signal module is excluded from this requirement.

Identification Markings - Each individual LED signal module shall be identified for warranty purposes. Each LED signal module shall be identified on the backside with the manufacturer's name and serial number. The following operating characteristics shall be identified: nominal operating voltage, power consumption, and Volt-Ampere. Modules shall have a prominent and permanent vertical indexing indicator, i.e. UP ARROW or the word UP or TOP, for correct indexing and orientation inside a signal housing. Modules conforming to this specification may have the following statement: "Manufactured in Conformance with the Interim Purchase Specification of the ITE for LED vehicle Pedestrian signal Modules" on an attached label.

(D) Manufacturer's Warranty. The standard contract warranty shall apply with time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.) who provides electrical service and maintenance of the intersection. Warranty shall provide the following stipulations:

- Isolated Failures Warranty Period not less than 7 Years
- Design Failure Warranty Period not less than 5 Years

Warranty for isolated lens failure shall include replacement LED module at no cost for materials and shipping for a period of 7 years from the date the intersection is considered substantially complete by the engineer. An LED module shall be considered failed when the luminosity drops below the ITE requirements listed above.

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LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

A product "Design Failure" is considered to have occurred if, within a period of 5 years or less, a total of ten percent (10%) of the LED modules supplied on a particular Job are considered failed as described above. The supplier shall then "recall" the entire shipment at no cost to the agency maintaining the equipment. This shall include labor and equipment necessary to replace the units.

3. **CONSTRUCTION REQUIREMENTS.** Construction shall be in accordance with the standard specifications. No distinction is made for span-wire installations, post mount, mast arm mount, or other mounting methods as described on the plan sheet(s).

4. **METHOD OF MEASUREMENT.**

   A. **Pedestrian Signal Head, LED.** Work completed and accepted and measured as provided above will be measured by unit.

   B. **Pedestrian Signal Head, LED Lens Retrofit (Ret).** Work completed and accepted and measured as provided above will be measured by unit.

5. **BASIS OF PAYMENT.**

   A. **LED Pedestrian Signal Head.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for PEDESTRIAN SIGNAL HEAD LED of the type, display and size specified, which price shall be full compensation for furnishing and installing all materials and signs; and for all labor, equipment, tools, and incidentals necessary to complete the work.

   B. **LED Pedestrian Signal Lens Ret.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for PEDESTRIAN SIGNAL LED LENS RET of the type, number of sections, color and display specified, which price shall be full compensation for removing existing unnecessary hardware and modifying existing housing; and for furnishing and installing all materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

   Payment will be made under:

Pay Item	Pay Unit
Countdown Pedestrian Signal Head, LED	Each

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ELECTRICAL CONDUCTORS FOR LUMINAIRES

DESCRIPTION. This item consists of furnishing and installing electrical conductors as noted on the plans. This shall include conductors from the luminaire service point to the luminaire disconnect point and from the luminaire disconnect point to luminaires mounted on the traffic signal poles. Circuit breakers and weatherproof breaker boxes are considered subsidiary to "Electrical Conductors for Luminaires" and shall be provided and installed by the Contractor at the luminaire disconnect point.

MATERIALS. The electrical conductors shall consist of two conductor cables (#12 A.W.G.). Electrical conductors shall be stranded or solid copper UF rated 600 volt, suitable for underground duct installation in wet or dry locations. Electrical conductors shall comply to ASTM Specification B3, B-8 or B-787. The insulation shall be a color coded premium grade flame retardant PVC (polyvinyl chloride). The jacket shall be polyamide nylon. Circuit breakers shall be rated at 20 amps.

CONSTRUCTION REQUIREMENTS. The Contractor shall furnish and install a luminaire disconnect (20 amp circuit breaker assembly and weatherproof box) at the location designated on the plans that meets the requirements of the local utility company. The Contractor shall connect the circuit breaker assembly to the line side of the service point supplying the controller. Conductors for luminaires shall run directly from load side of luminaire disconnect to luminaires mounted on signal poles. Disconnect or trip of luminaire disconnect shall not effect power to controller. Luminaire disconnect shall be clearly labeled as "Street Light" circuit.

Splices are allowed at pole bases or as approved by the Engineer. Splicing methods considered acceptable are: Soldered, compression connectors of proper size employing cyclic crimping devices, terminal strips, or other method approved by the Engineer. Splices on terminal strips shall utilize proper spade lugs. All splices shall be waterproof. When taping is required, the wire shall be covered with six (6) layers of plastic electrical tape and sealed with "Scotch-Coat" or other similar electrical sealing material. Where wire nuts are used, soldering, taping and sealing is still required. Electrical insulating putty may be used to round off sharp corners of wire or connectors before applying tape. Slack cable (3 ft. min.) shall remain at each splice location or at end of luminaire arm when luminaire is not to be installed by contractor. Final connection of power from the local utility to the service point will be made by others.

METHOD OF MEASUREMENT. Electrical Conductors for Luminaires will be measured by the linear foot. Multiple conductors shall be measured together, not measured singularly.

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ELECTRICAL CONDUCTORS FOR LUMINAIRES

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for Electrical Conductors for Luminaires of the type and size called for on the plans, which price shall be full compensation for furnishing materials, splicing and connections and for all tools, equipment, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Electrical Conductors for Luminaires	Linear Foot

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ELECTRICAL CONDUCTORS-IN-CONDUIT

DESCRIPTION. This item consists of furnishing and installing electrical conductors from point to point as indicated on the plan sheets.

MATERIALS. The electrical conductors shall consist of cables of the gauge and number of conductors specified on the plan sheets, and shall be USE rated (single conductor) or UF rated (two conductor), suitable for underground duct installation in wet or dry locations. Electrical conductors shall be solid or stranded copper unless otherwise approved by the Engineer.

Where specified "With Ground" (WG), included shall be a copper safety ground of either bare copper or green insulated; of not less than two sizes less than the load carrying conductors, whichever is greater.

Where specified "Equipment Ground Conductor" (E.G.C.), conductor shall be a copper safety ground of either bare copper or green insulated of the size and quantity shown.

CONSTRUCTION REQUIREMENTS. Splices are allowed at pole bases or as approved by the Engineer. Unless waterproof quick disconnects are used, Splicing methods considered acceptable are: Soldered, compression connectors of proper size employing cyclic crimping devices, terminal strips, or other method approved by the Engineer. Splices on terminal strips shall utilize proper spade lugs. All splices shall be waterproof. When taping is required, the wire shall be covered with six (6) layers of plastic electrical tape and sealed with "Scotch-Coat" or other similar electrical sealing material. Where wire nuts are used, soldering, taping and sealing is still required. Electrical insulating putty may be used to round off sharp corners of wire or connectors before applying tape. Slack cable (3 ft. min.) shall remain at each splice location.

METHOD OF MEASUREMENT. Electrical Conductors-In-Conduit shall be measured by the linear foot. Multiple conductors shall be measured together, not measured singularly.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for Electrical Conductors-In-Conduit of the type and size called for on the plans, which price shall be full compensation for furnishing materials, splicing, and connections and for all tools, equipment, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Electrical Conductors-In-Conduit (_c/_ A.W.G.,_)	Linear Foot

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JOB NO. 080457

LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)

1. **DESCRIPTION.** This work shall consist of furnishing and installing LED luminaire assemblies on traffic signal poles, including the accessories, in accordance with these specifications and at the locations shown on the plans or as directed.

2. **MATERIALS AND CONSTRUCTION REQUIREMENTS.**

   A. **Luminaire.** Each luminaire assembly shall consist of a "Cobra Head", power door style; Light Emitting Diode (LED) light source capable of outputting at least 12,000 lumens, and optics to produce an IESNA Type-III light distribution with a BUG rating of U0. The rated Correlated Color Temperature (CCT) shall be 4000° K +/- 200°K, and the Color Rendering Index (CRI) shall be no less than 60. As a minimum, 40% of Light Flux values shall be maintained on the downward street side; with greater than 0.002 foot-candles per 1000 lamp lumens at a point of "1 x 4" mounting heights on the downward street side. Mesopic multipliers (i.e., effective luminance factors) shall not be used. All values shall assume photopic visual adaptation. Luminaires with a Light Loss Factor using the L70 Method shall have a minimum rating of 50,000 hours, and a minimum 5 year warranty. The warranty shall provide for the repair or replacement of defective electrical parts (including light source and power supplies/drivers) for a minimum of five (5) years from the date of purchase. Luminaire shall be able to operate normally in temperatures from -40° C to +40° C. LED light source(s) and driver(s) shall be RoHS compliant.

   The luminaires shall be all aluminum die cast hinged construction. Each luminaire assembly shall have a photocell and receptacle in the top of the luminaire housing and shall meet the requirements of the local utility company. The luminaires shall be rated IP-66 or better, and shall employ the use of borosilicate glass lenses. All luminaire internal components shall be assembled and pre-wired using modular electrical connections, and shall be designed for ease of component replacement and end-of-life disassembly.

   All luminaires shall contain built-in drivers with power door assembly, and be of an approved streamlined design. Drivers shall be wired for line voltage as indicated on the plan sheets (plus or minus 10% line voltage, variation), 60-cycle, single phase, multiple circuit operation, with high power factor (90% or higher). The driver shall be suitable for the proper operation of the LED array inclusive to the luminaire assembly, with a minimum open circuit voltage as specified on the plan sheets, and shall be an easily replaceable part of the luminaire assembly. The luminaire shall be listed for wet locations by a U.S. Occupational Safety Health Administration (OSHA) Nationally Recognized Testing Laboratory (NRTL). The luminaire shall have lightning suppression equipment capable of meeting the performance requirements for electrical immunity as specified in ANSI C136.2, using a combination wave test level of at least 10kV/5kA.

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LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)

Luminaire assemblies (with accessories) shall be supplied in one style or model number from one manufacturer only. The contractor shall submit manufacturer's brochures with illustrations and data in addition to LM-79, LM-80 and TM-21 reports to the Arkansas Department of Transportation for approval of luminaires, accessories and installation details. All submitted luminaires shall be listed on the Department of Energy's LED Lighting Facts website, and all supporting calculations and test data from the LM-79, LM-80 and TM-21 reports must be in accordance with LED Lighting Facts guidance.

B. Photo Cell. Each luminaire assembly shall have a solid state photocell and receptacle in the top of the luminaire housing. Photocells shall have a locking-type photoelectric control with a rating of 5,000 operations minimum (13 years) on loads of 1800VA. The photocell shall operate at the same voltage rating as the luminaire driver.

3. METHOD OF MEASUREMENT. Completed and accepted LED Luminaire Assembly will be measured by the unit.

4. BASIS OF PAYMENT. Work completed and accepted under this item and measured as provided above shall be paid for at the contract unit price bid for each LED Luminaire Assembly, which price shall be full compensation for furnishing and installing the luminaires, lamps of the type described herein, driver, photocell, and all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
LED Luminaire Assembly	Each

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LED TRAFFIC SIGNAL HEAD

1. **DESCRIPTION.** This item shall consist of furnishing and installing 300 mm (12") diameter Traffic Signal Heads and components based on Light Emitting Diode (LED) technology according to these specifications as well as **Section 706 Traffic Signal Head** of the Standard Specifications for Highway Construction, Edition of 2014, to approval of the engineer. Portions of the standard specifications will be superseded by these special provisions.

2. **MATERIALS.** The LED modules shall be suitable for span wire and mast arm mounted signals. Units must meet the following specifications to be accepted.

   (A) Physical and Mechanical. LED traffic signal modules designed shall not require special tools for installation. Retrofit replacement LED signal modules shall fit into existing traffic signal housings built to the VTCSH Standard without modification to the housing. Installation of a retrofit replacement LED signal module into an existing signal housing shall only require the removal of the existing optical unit components, i.e., lens, lamp, and gaskets; shall be weather tight and fit securely in the housing; and shall connect directly to existing electrical wiring utilizing spade connectors. It shall not be necessary to remove reflector or lamp module. Reflector and lamp module is not required where new housings are provided.

   (B) Optical Requirements. The RED and GREEN modules shall be measured per ITE specifications, and are required to meet luminous values that are a minimum of 115 percent greater than the required minimum values in the specifications at the time of production. The YELLOW modules shall be tested for luminous output at 25°C, allowing the modules to achieve thermal equilibrium for 60 minutes, while the modules are energized at nominal operating voltage, at a 8.3% (or 1/12) duty cycle or 5 sec on/55 sec off). The yellow modules shall meet all other ITE specifications.

   (C) Optical Unit. LED signal modules shall meet the following requirements:

   Optical unit replacement - The LED module shall be constructed to allow the replacement of the outer lens and/or the light engine when needed.

   Lens Surface - The external lens shall be smooth on the outside to prevent excessive dirt/dust buildup.

   Tinting - The RED, YELLOW and optionally on GREEN lens shall be tinted or shall use transparent film or materials with similar characteristics.

   Chromaticity - The measured coordinates of LED signal modules shall conform to the chromaticity requirements of Section 8.04 and Figure 1 of the VTCSH standard.

   Environment - The LED signal module shall be rated for use in the ambient operating temperature range, measured at the exposed rear of the module, of -40° C (-40° F) to +74°C (+165° F). The LED sign module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991, sections 4.7.2.1 and

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LED TRAFFIC SIGNAL HEAD

4.7.3.2, for Type 4 enclosures to protect all internal LED, electronic, and electrical components. The LED signal module lens shall be UV Stabilized.

Pre assembly - The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing traffic signal housing. The power supply for the LED signal module may be either integral or packaged as a separate module. The power supply may be designed to fit and mount inside the traffic signal housing adjacent to the LED signal module. The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

LED Drive Circuitry (parallel) - The individual LED light sources shall be wired so that a catastrophic failure of one LED light source will result in the loss of only that one LED light source, and the loss of no more than 1% of the total LED'S within the LED signal module.

Material Composition - Materials used for the lens and signal module construction shall conform to ASTM specification for the materials where applicable. Enclosures containing either the power supply or electronic components of the signal modules shall be made of UL94VO flame retardant materials. The lens of the signal module is excluded from this requirement.

Identification Markings - Each individual LED signal module shall be identified for warranty purposes. Each LED signal module shall be identified on the backside with the manufacturer's name and serial number. The following operating characteristics shall be identified: nominal operating voltage, power consumption, and Volt-Ampere. Modules shall have a prominent and permanent vertical indexing indicator, i.e. UP ARROW or the word UP or TOP, for correct indexing and orientation inside a signal housing. Modules conforming to this specification may have the following statement: "Manufactured in Conformance with the Interim Purchase Specification of the ITE for LED vehicle Traffic Signal Modules" on an attached label.

The first sentence of Subsection 706.02, Materials. (d) is deleted and the following substituted therefore:

The Contractor shall furnish and install the proper signs [either Left Turn Signal (MUTCD R10-10) or Left Turn Yield on Flashing Yellow Arrow (MUTCD Special) or Left Turn Yield on Green (symbolic green ball (MUTCD R10-12)] adjacent to signal heads controlling an exclusive left turn lane.

(E) **Manufacturer's Warranty.** The standard contract warranty shall apply with time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.) who provides electrical service and maintenance of the intersection. Warranty shall provide the following stipulations:

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- Isolated Failures Warranty Period not less than 7 Years
- Design Failure Warranty Period not less than 5 Years

Warranty for isolated lens failure shall include replacement LED module at no cost for materials and shipping for a period of 7 years from the date the intersection is considered substantially complete by the engineer. An LED module shall be considered failed when the luminosity drops below the ITE requirements listed above.

A product "Design Failure" is considered to have occurred if, within a period of 5 years or less, a total of ten percent (10%) of the LED modules supplied on a particular Job are considered failed as described above. The supplier shall then "recall" the entire shipment at no cost to the agency maintaining the equipment. This shall include labor and equipment necessary to replace the units.

3. **CONSTRUCTION REQUIREMENTS.** Construction shall be in accordance with the standard specifications. No distinction is made for span-wire installations, post mount, mast arm mount, or other mounting methods as described on the plan sheet(s).

   Whether complete head assembly is replaced or existing head is retrofitted with new lenses, contractor shall be responsible for aligning head properly with approach lanes. This does not include relocating head and bracket, but adjusting the alignment of the head to achieve maximum visibility to motorists.

4. **METHOD OF MEASUREMENT.** Units are bid as "3 Section", "4 Section" or "5 Section". A 3 Section unit consists of one each: Red Ball, Yellow Ball, and Green Ball. A 4 Section unit consists of one each: Red Ball, Yellow Ball, Green Ball, and Green Arrow or Red Arrow, Yellow Ball, Yellow Arrow, and Green Arrow. A 5 Section unit consists of one each: Red Ball, Yellow Ball, Green Ball, Yellow Arrow, and Green Arrow. No distinction shall be made in the unit based on the orientation of the arrow indications.

   A. **Traffic Signal Head, LED.** Work completed and accepted and measured as provided above will be measured by unit.

   B. **Traffic Signal Head, LED Lens, Retrofit (Ret).** Work completed and accepted and measured as provided above will be measured by unit.

5. **BASIS OF PAYMENT.**

   A. **LED Traffic Signal Head.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Traffic Signal Head, LED of the type, display and size specified, which price shall be full compensation for furnishing and installing all materials and signs; and for all labor, equipment, tools, and incidentals necessary to complete the work.

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LED TRAFFIC SIGNAL HEAD

B. LED Traffic Signal Lens Ret. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Traffic Signal Head, LED Lens, Retrofit of the type, number of sections, color and display specified, which price shall be full compensation for removing existing unnecessary hardware and modifying existing housing; and for furnishing and installing all materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Traffic Signal Head, LED, (___Section, 1 Way)	Each
Traffic Signal Head, LED Lens, Retrofit (___Section, 1 Way)	Each

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REMOVAL OF TRAFFIC SIGNAL EQUIPMENT

DESCRIPTION. Under this item, the contractor shall remove traffic signal heads, traffic signal poles, traffic signal pole foundations, span wire assemblies, traffic controllers and all other existing signal equipment at locations shown on the plans or as ordered by the Engineer.

MATERIALS. The contractor shall provide all equipment and tools necessary to remove the signal equipment at locations shown on the plans or as designated by the Engineer.

CONSTRUCTION REQUIREMENTS. The contractor shall maintain the existing signal operations as much as possible throughout construction until the completion of the contract. Control of the intersection shall be by police officers, flagmen, or as determined by the Engineer at anytime that the signals are not in operation.

The contractor shall remove the traffic signal pole foundations and all appurtenances such as reinforcing steel, conduit, anchor bolts and cable to a depth of 18 inches below grade. The concrete foundations shall be broken up and the material disposed of outside of the limits of the project by the contractor. The contractor shall fill with earth all holes where concrete foundations or wooden span wire poles have been removed under this item. The earth in the hole shall be thoroughly compacted until it is as firm and unyielding as the surrounding material. Concrete or asphalt surfaces shall be restored to existing conditions.

All equipment shall remain the property of the City or County and the contractor shall notify the City or County 24 hours in advance of the removal. All removed equipment shall be stored by the contractor at the construction site. The contractor shall provide a secure, weather-tight enclosure to store all electric components until they can be removed from the construction site.

METHOD OF MEASUREMENT. Removal of traffic signal equipment will be measured by the lump sum.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract lump sum price bid for Removal of Traffic Signal Equipment, which price shall be full compensation for furnishing all materials, equipment, tools, labor, and incidentals necessary to complete the work as described herein.

Payment will be made under:

Pay Item	Pay Unit
Removal of Traffic Signal Equipment	Lump Sum

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SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)

DESCRIPTION. This item consists of furnishing and installing a distribution panel, circuit breaker, lightning arrestor, weatherhead, clamps, wiring, ground rod, and miscellaneous fittings at locations designated on the plans and in accordance with the latest version of the National Electrical Code.

Lightning arrestor shall be SPD Type 2 (load side) per NEC and UL Code 1449.

All construction and wiring shall be in compliance with local electrical codes. The Contractor shall perform all necessary liaisons with local power companies in order to ascertain such specific requirements as the power company may apply to each location.

MATERIALS AND CONSTRUCTION REQUIREMENTS. Height of the service riser weatherhead shall be 20 feet or greater depending on street crossings or other obstructions, unless otherwise approved by the Engineer.

The required weatherhead, conduit nipples, couplings, clamps and other fittings exposed to the weather shall be hot dipped galvanized steel and shall be attached to the pole in such a manner as to facilitate the final steel conduit connecting weatherhead. Service disconnect, distribution cabinet and tie to underground circuits is paid for by Service Point Assembly. Galvanized steel conduit for riser shall be paid as a separate item.

The Contractor shall furnish and install service feeder wire from the distribution cabinet to the main breaker and from the main breaker past the weatherhead. Tie-in and splicing of the service feeder wire to the secondaries supplied by the local utility will be performed by others and shall not be considered a part of this contract. Grounding shall be as shown on the Standard Drawing SD-9 (Service Point).

Mounted at the service location shall be NEMA 3R enclosure(s), circuit breaker, distribution panel and main breaker of a design and model number suitable to the local power company and as approved by the Engineer. The circuit breaker shall be magnetic trip only and sized in accordance with the plans. If required, a meter base provided by the utility company shall be installed above the distribution panel. All enclosures and circuit breakers shall be rated for 240 V.A.C. or greater, unless otherwise designated on the plan sheets. A 30-amp breaker shall be provided.

Where lighting is included in the signal installation for intersection lighting, a 20-amp breaker shall be provided.

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SERVICE POINT ASSEMBLY
(TRAFFIC CONTROL DEVICES)

The Contractor shall submit to the Engineer two (2) printed copies of the applicable brochures containing the design criteria for the equipment which the Contractor proposes to install for approval. The specific items that are proposed for use shall be clearly marked in the applicable brochures. A list shall be attached to identify the item and contain the manufacturer, quantity, model, and identifying descriptions of each item. The items to be submitted: load centers and enclosures, lightning arrestor, and all circuit breakers.

METHOD OF MEASUREMENT. Completed and accepted Service Point Assembly will be measured by the unit.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid each for Service Point Assembly for the number of circuits specified, which price shall be full compensation for furnishing and installing a treated wood pole, enclosure(s), circuit breaker(s), main breaker, distribution panel, steel conduit, conduit fittings, wiring and ground rod; for testing the service point assembly; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Service Point Assembly (____ Circuit(s))	Each

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THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)

Section 719 Thermoplastic Pavement Marking of the Standard Specifications, Edition of 2014, is hereby amended as follows:

Subsection 719.05 Basis of Payment is hereby expanded to include the item Thermoplastic Pavement Marking (Yield Line).

Payment for this item will be made under:

Pay Item	Pay Unit
Thermoplastic Pavement Marking (Yield Line)	Lin. Ft.

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ENHANCED THERMOPLASTIC PAVEMENT MARKING

DESCRIPTION. This item shall consist of furnishing and placing enhanced thermoplastic pavement markings, of the color and type specified, all according to these specifications and in conformity with the dimensions and at the locations shown on the plans or as directed.

The markings are to be placed under existing traffic conditions. The work shall comply with the MUTCD except as modified by these specifications.

MATERIALS. The material used shall be a product especially compounded for traffic markings. Each container shall be clearly and adequately marked to indicate the color, weight, batch or lot number, and type of material.

The Contractor shall furnish a certification from the manufacturer showing that the material requirements of this specification have been met.

The material shall meet the requirements of AASHTO M 249 with the following additions:

Yellow materials color specifications shall be as follows:

Color Specifications							
Color Specification Limits - Daytime Initial							
Chromaticity Coordinates							
1		2		3		4	
x	y	x	y	x	y	x	y
0.499	0.466	0.545	0.455	0.518	0.432	0.485	0.454
Luminance Factor, Y (%)							
Minimum				Maximum			
40.0				60.0			

Initial daytime color determination will be made in accordance with AASHTO T 250. Values shall be evaluated on material without the drop-on beads.

Color Specifications Limits - Daytime Retained							
Chromaticity Coordinates							
1		2		3		4	
x	y	x	y	x	y	x	y
0.560	0.440	0.490	0.510	0.420	0.440	0.460	0.400

Retained daytime color limits shall conform to the specifications for a minimum of ninety days for construction pavement markings and one year for all other markings. Retained readings will be determined on a beaded surface in accordance with the requirements of ASTM E 2366.

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Color Specifications Limits - Nighttime Initial with drop-on beads							
Chromaticity Coordinates							
1		2		3		4	
x	y	x	y	x	y	x	y
0.575	0.425	.508	0.415	0.473	0.453	0.510	0.490

Initial nighttime color limits will be determined in accordance with the requirements of ASTM E 2367 on a beaded surface.

The pigments used for the pavement marking material compound shall not contain any compounds that will exceed the values listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1.

Heat-fused, pre-formed thermoplastic pavement marking material shall meet the requirements of AASHTO M249 with the exception of the relevant differences due to the material being pre-formed.

The material shall not break down or deteriorate if held at the plastic temperature for a period of 4 hours nor by reason of 4 re-heatings to the plastic temperature. The temperature-viscosity characteristics of the thermoplastic material shall remain consistent and there shall be no obvious change in the color of the material.

The material shall not deteriorate by contact with sodium chloride, calcium chloride, or other chemical formations on the roadway or streets, or because of the oil contact on pavement material, or from oil droppings from traffic.

After application and proper drying time, material shall show neither appreciable deformation nor discoloration under local traffic conditions and in air or road temperatures ranging from 0° F (-18° C) to 160° F (71° C). The material shall not smear or spread under normal traffic conditions at temperatures below 160° F (71° C).

Under this specification, the term "drying time" shall be defined as the minimum elapsed time after application when the pavement marking shall have and retain the characteristics required in the preceding paragraphs. In addition, the drying time shall be established by the minimum elapsed time after application when traffic will leave no impression or imprint on the applied marking. The drying time shall not exceed a characteristic straight-line curve, the limits of which are 2 minutes at 50° F (10° C) and 15 minutes at 90° F (32° C), measured at a maximum relative humidity of 70%.

The pavement markings shall maintain its original dimension and placement. The exposed surface shall be free of tack. Cold ductility of the material shall be such as to permit normal movement with the road surface without chipping or cracking. The material shall not be slippery when wet and it shall not lift from the pavement in freezing weather.

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The marking shall have a uniform cross section. The density and character of the material shall be uniform throughout its thickness and shall be completely reflectorized both internally and externally.

The glass beads used for the intermix and the drop-on application shall meet AASHTO M-247 for the gradation specified below, with the exception that the glass beads shall have a minimum 80% true spheres in all gradations.

Intermix Glass Beads. The required 30-40% glass bead intermix shall be comprised of 50% of AASHTO M 247 Type 1 and 50% of AASHTO M 247 Type 3 beads. The beads shall be uncoated.

Drop-On Beads. Drop-on beads shall be applied using a double drop system capable of applying the beads at the specified application rates. Drop-on beads shall consist of AASHTO M 247 60% Type 1 beads and 40% Type 4 beads. The beads shall be dual coated for moisture resistance and adhesion.

CONSTRUCTION REQUIREMENTS. The thermoplastic compound shall be screed or ribbon extruded to the pavement surface. Heat-fused, pre-formed pavement markings shall be fusible to asphalt or Portland cement concrete surfaces by means of the normal heat of a propane weed-burner type of torch or other heating device as recommended by the manufacturer.

The equipment used to apply the thermoplastic compound onto the pavement shall be suitably equipped for heating and controlling the flow of the material. The equipment shall be constructed to provide continuous mixing and agitation of the material. The conveying parts of the equipment, between the main material reservoir and applicator, shall be so constructed as to prevent accumulation and clogging. The equipment shall be constructed so that all mixing and conveying parts, up to and including the applicator, maintain the material at the plastic temperature. The thermoplastic material shall be dispensed at a temperature recommended by the manufacturer. The applicator shall include a cutoff device remotely controlled to provide clean, square stripe ends and to provide a method for applying skip lines.

The thermoplastic reservoir shall be insulated and equipped with an automatic thermostatic control to maintain the proper temperature of the material.

The thermoplastic machine shall comply with the requirements of the National Board of Fire Underwriters.

Beads applied to the surface of the completed stripe shall be applied by an automatic double drop bead dispenser attached to the pavement marking equipment in such a manner that the beads are immediately dispensed upon the completed line. The bead dispenser shall be equipped with an automatic cutoff control, synchronized with the cutoff of the pavement marking equipment. The Type 1 and Type 4 beads shall be automatically applied at a combined total minimum uniform rate of 8 to 10 pounds of glass beads to every 100 square feet. The Type 4

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beads shall be applied first, and shall be followed immediately by the Type 1 bead application. They shall be applied across the entire line width, ensuring uniform application and embedment of the beads to 50-60% of the bead diameter.

Thermoplastic markings shall not be applied to the pavement surface when the pavement surface temperature is less than 50° F or when the pavement surface shows evidence of moisture.

On new concrete pavements where no pavement markings exist or on existing concrete or asphalt pavements where the existing pavement markings are paint or thermoplastic and do not conflict with the proposed pavement markings, blasting with water or sand or a combination thereof will be required to remove any curing compound, oxidized paint or thermoplastic, or dirt to ensure a good bond. This blasting is considered surface preparation. On newly constructed asphalt pavements any sand, grit, or other surface contaminants must be removed using compressed air and/or sweeping. Water blasting may be necessary to remove surface contaminants which cannot be removed by the use of compressed air and/or sweeping. This work is considered surface preparation.

Conflicting pavement markings that exist shall be removed by blasting with water and/or sand or by grinding. This blasting or grinding is considered pavement marking removal.

The thickness of thermoplastic markings above the roadway surface shall be 90 mils. The thickness will be measured by a device supplied by the Contractor during the course of the project capable of measuring the thickness of the marking as installed on the pavement. The minimum thickness, as required above, will be measured in the center of the line when gauged by the equipment described above. The minimum thickness 1/2" from the edges shall not be less than 75% of the thickness required in the center. Maximum thickness of markings is 3/16".

On concrete pavements, paint pavement markings according to Section 718 shall be applied as a primer for the thermoplastic markings, except where thermoplastic markings are to be applied over existing thermoplastic markings. Paint applied to concrete pavement solely as a primer will not be measured or paid for separately, but full compensation therefor will be considered included in the contract unit prices bid for the various items of Enhanced Thermoplastic Pavement Markings. A primer other than paint may be used when recommended by the thermoplastic manufacturer.

A primer is not required for asphalt pavements, but paint pavement markings complying with Section 718 may be used by the Contractor as a primer at no cost to the Department.

When temperature limitations prohibit placement of thermoplastic markings within the 3 or 14 day limit specified in Section 604, the Contractor shall place painted markings according to Section 718. Painted markings required due to temperature limitations will be measured and paid for under Section 604. In this case, the Contractor shall maintain the painted markings at no additional cost to the Department until the thermoplastic markings, including primer if required, are installed.

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Spotting the pavement for centerline location on two-way roadways is required. It will be the responsibility of the Contractor to spot using a string line or chain so that spots are placed at intervals not exceeding 10'. The Department will establish the no passing zones if required. On one-way roadways spotting is required for the initial edge line or lane line placed. Edge lines and/or lane lines may be installed by referencing to center or lane lines. Edge lines shall not be broken for driveways. The trace of the thermoplastic line shall be uniform.

The finished lines shall have well defined edges, shall be uniform in thickness, and shall be straight and true. No stripe shall be less than the specified width. Any corrections of variations in width or alignment of the stripes shall not be made abruptly. Lines that cannot be corrected to meet these requirements shall be removed in accordance with Section 604 at the Contractor's expense.

Line removal as specified on the plans shall be performed in such a manner that no conflicting pavement marking will be left in place. Removal of the pavement marking by a means that will gouge the surface will not be permitted.

The Contractor shall use only workers experienced in installing thermoplastic markings.

METHOD OF MEASUREMENT.

(a) Enhanced Thermoplastic Pavement Markings will be measured by the linear foot (meter) of line of the width specified actually placed.

(b) Sand or water blasting in surface preparation will not be paid for separately, but full compensation therefor will be considered included in the contract unit price bid for Enhanced Thermoplastic Pavement Marking.

(c) Removal of pavement markings will be measured and paid for under Section 604.

BASIS OF PAYMENT. (a) Enhanced Thermoplastic Pavement Markings. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for Enhanced Thermoplastic Pavement Markings of the width specified, which price shall be full compensation for furnishing and installing markings; for surface preparation; and for all labor, equipment, tools, furnishing thickness gauge, and incidentals necessary to complete the work.

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ENHANCED THERMOPLASTIC PAVEMENT MARKING

Payment will be made under:

Pay Item	**Pay Unit**
Enhanced Thermoplastic Pavement Marking White (_")	Linear Foot
Enhanced Thermoplastic Pavement Marking Yellow (_")	Linear Foot
Enhanced Thermoplastic Pavement Marking (Words)	Each
Enhanced Thermoplastic Pavement Marking (Arrows)	Each
Enhanced Thermoplastic Pavement Marking (Railroad Emblems)	Each
Enhanced Thermoplastic Pavement Marking (Bike Emblems)	Each

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GENERAL REQUIREMENTS FOR SIGNS

Section 723 of the **Standard Specifications for Highway Construction, Edition of 2014**, is hereby amended as follows:

Subsection 723.02, Materials and Fabrication, is hereby deleted and the following substituted therefore.

Materials and Fabrication. (a) General. Signs shall comply with the requirements of the MUTCD, FHWA *Standard Highway Signs*, and *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.*

All colors for signs shall match the colors specified in the MUTCD. The color and size of letters, symbols, borders, and background on signs shall be as specified on the plans.
Signs shall be made of aluminum and shall be reflectorized.

(b) Sign Panels. Standard signs shall consist of a single sheet of aluminum alloy (ASTM B 209, Alloy 5052 H38) without stiffeners on the back. Minimum sign blank thickness shall be 0.080" (2.0 mm) for a sign size of 9 square feet (0.84 sq m) or less or 0.100" (2.5 mm) for a sign size greater than 9 square feet (0.84 sq m). Sign blanks shall be flat and straight and within commercial tolerances established by the aluminum industry.

Guide signs shall be fabricated using one piece extruded panels fabricated of aluminum alloy (ASTM B 221, Alloy 6063 T6).

Extruded panel signs shall consist of sign panels; stringers or horizontal supporting members; necessary fasteners for assembling the units; reflective materials; letters; numerals; symbols; and border. All extrusions and fasteners shall be applied without causing objectionable projections on the sign face.

The one piece extruded aluminum panels shall be a minimum of 12" (300 mm) in width except one 6" (150 mm) panel may be used per sign face when necessary to construct the sign as shown on the plans.

All extruded panels shall be bolted together at every other hole (every 24" [610 mm]) with the faces and ends in alignment.

Single sheet and extruded panels to which reflective sheeting is to be applied shall be degreased, etched, and alodized.

Degreasing shall be done by the vapor method or alkaline method. Vapor degreasing shall be accomplished by total immersion of the sign panels in a saturated vapor of trichloroethylene or

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GENERAL REQUIREMENTS FOR SIGNS

perchloroethylene. Alkaline degreasing shall be accomplished by immersion of the sign panels in a tank containing alkaline solutions, controlled and titrated to the solution manufacturer's specification. Immersion time shall depend upon the amount of soil present and the gage of the metal. Trade mark printing shall be removed with lacquer thinner or by a controlled alkaline cleaning system.

Etching shall be done by the acid method or the alkaline method. Acid etch shall be done by immersion in a 6% to 8% phosphoric acid solution at 100° F (38° C) for a minimum of 3 minutes, then thoroughly rinsing with cold water, followed by a hot water tank rinse of 1 minute in water heated to 180° F (82° C). Alkaline etch shall be done by etching the precleaned surface in an alkaline etching material that is controlled by titration, using the time, temperature, and concentration specified by the solution manufacturer, then thoroughly rinsing. Remove smut with an acidic, chromium compound type solution as specified by the solution manufacturer, then rinse thoroughly.

The sign panels shall be treated by the alodizing process to uniformly provide a chemically formed light and tight amorphous coating that becomes an integral part of the aluminum alloy. This process shall be accomplished according to the recommendation of the manufacturer of the coating.

All fabrication, including cutting and punching of holes, excluding holes for demountable letters, numerals, symbols, and borders, shall be completed before metal degreasing, etching, alodizing, and the application of retroreflective sheeting.

Sign panels shall be free of buckles, warp, dents, cockles, burrs, and defects resulting from fabrication. The surface of all sign panels shall be flat.
The Contractor shall submit a Certified Test Report to the Engineer covering the sign panels.

(c) Retroreflective Sheeting. The retroreflective sheeting for signs shall comply with ASTM D 4956 for Type III, IV, VIII, IX, or XI retroreflective sheeting, except that Type IX sheeting shall be used on all W1-6, W1-8, and OM-3 signs. Type XI sheeting shall be used on all R5-1 and R5-1a signs. All retroreflective sheeting shall have either Class 1 or Class 2 backing.

Retroreflective sheeting shall be applied to properly treated sign panels with mechanical equipment in a manner specified by the sheeting manufacturer. Sign faces comprising two or more pieces or panels of retroreflective sheeting must be carefully matched for color at the time of sign fabrication to provide uniform appearance and brilliance both day and night. Alternate successive width sections of either sheeting or panels must be reversed and consecutive to ensure that corresponding edges of retroreflective sheeting lie adjacent on the sign. Non-conformance may result in non-uniform shading and an undesirable contrast between adjacent widths of applied sheeting that will not be acceptable.

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At splices, sheeting shall be overlapped no less than 3/16" (5 mm). Sheeting applied to a welded panel shall be trimmed flush with the edge of the panel.

(d) Legend. All legend, which includes letters, numerals, symbols, arrows, and border, shall have a regular outline, be clean cut and sharp, and shall have a continuous stroke and border without ragged or torn edges.

All legend on guide signs shall be of the size shown on the plans. Legend on standard signs shall comply with the latest revision of FHWA *Standard Highway Signs*.

The legend on freeway main lane guide signs shall be demountable. Unless otherwise specified, the legend on all other guide signs shall be manufactured using either direct application or electronic cuttable films. All other signs shall be manufactured using standard industry processes, including silk screening, electronic cuttable films, and digital printing. Digitally printed signs shall be overlaid with a clear UV film per the sheeting manufacturer's recommendations.

Transparent colors, inks, paints, and films used in the sign manufacturing process shall be of the type and quality recommended by the manufacturer of the reflective sheeting and shall conform to red, blue, yellow, and green colors approved by the FHWA and as shown in the MUTCD and FHWA *Standard Highway Signs*. The Contractor shall provide a full matched component system warranty, and shall provide certification that the materials used shall meet all MUTCD minimum requirements for retroreflectivity and contrast for the warranty period of the sheeting.

The sheeting used for demountable and direct applied legends shall be from the same manufacturer of the sheeting used on the sign face. The sign area outside the corner radius shall not be trimmed to match the border radius. Unless otherwise shown, demountable legends and other features of the sign message shall be applied to flat aluminum frames by a mechanical applicator process.

Frames for border strips, corners, shields, and legend shall be fabricated from 0.063" (1.6 mm) sheet aluminum complying with the requirements of ASTM B209, Alloy 5052-H38. Mounting holes shall be provided with the frames to permit the use of screws, bolts, rivets, or other fasteners of stainless steel, galvanized steel, or aluminum to fasten the frames to the sign face, subject to the condition that dissimilar metals shall be insulated to prevent corrosion.

The aluminum frames shall comply with Subsection 723.02(b).

All border material shall be secured from the same company that furnishes the cutout letters, numerals, etc., and shall be mounted in the same manner as the cutout letters.

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RELOCATION OF EXISTING OVERHEAD SIGN STRUCTURES

DESCRIPTION: This item shall consist of removal and relocation of existing sign structures to new foundations as shown on the plans or as directed by the Engineer.

MATERIALS: Materials for relocation of existing overhead sign structures shall conform to the following specifications:

Bolts:	ASTM F3125, Grade A325, Type 1
Locknuts:	ASTM A563, Grade DH or AASHTO M 292, Grade 2H
Washers:	ASTM F436
Nuts:	ASTM A563, Grade DH or AASHTO M 292, Grade 2H

Bolts, nuts, and washers shall be furnished and galvanized in accordance with Subsection 807.06. Anchor bolts shall conform to AASHTO M314 Gr. 55, with supplementary requirement S1, galvanized in accordance with Subsection 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with Subsection 807.07.

Concrete for footings shall comply with Section 802 for Class S concrete. The Department will perform all acceptance sampling and testing at the frequencies shown for Contractor acceptance testing in Subsection 802.06. Reinforcing steel shall comply with Section 804 for Grade 60.

CONSTRUCTION REQUIREMENTS: Excavation, backfill, compaction, and disposal of surplus materials shall be performed according to Section 801. Compaction shall be accomplished to the extent necessary to prevent future settlement of the backfill. Disturbed surfaces shall be returned to the original condition.

The applicable provisions of Sections 802, 804, and 807 shall govern the construction and installation of concrete, reinforcing steel, and anchor bolts respectively.

The Contractor shall provide new bolts, nuts, washers, and locknuts where the structure is disassembled for relocation. Undamaged lindapters can be reused at the discretion of the Engineer.

Anchor bolts shall be pretensioned. Exposed anchor bolt threads shall be cleaned and lubricated prior to the installation of leveling nuts. Threads and bearing surfaces of nuts shall be cleaned and lubricated immediately prior to assembly. Leveling nuts shall be initially installed at the same elevation. Leveling nuts/washers shall be in firm contact with the base plate prior to snug tightening of the top nuts. Top nuts/washers shall be in firm contact with the base plate when snug tight. Beveled washers may be required to provide firm contact. After top nuts are snug tight, the lower nuts shall be tightened to a snug tight condition to ensure full contact is achieved. After all nuts have been brought to a snug tight condition, bolts shall be tensioned using the turn-of-nut method. For the turn-of-nut method, nuts shall be incrementally turned using a star pattern until achieving the required rotation specified in Table 1-1, a minimum of two tightening cycles (passes) will be required.

RELOCATION OF EXISTING OVERHEAD SIGN STRUCTURES

Table 1-1 Nut Rotation for Turn-of-Nut Pretensioning

Anchor Bolt Diameter	Nut Rotation [a,b]
≤ 1-1/2 inch	1/3 turn
> 1-1/2 inch	1/6 turn

[a] Nut rotation is relative to the anchor bolt. The tolerance is plus 20 degrees, minus 0 degrees

[b] A beveled washer shall be used if the nut is not in firm contact with the baseplate or the outer face of the baseplate is sloped more than 1:40.

Field welding will not be permitted except upon approval in writing by the Engineer.

All sign supports shall provide a minimum vertical clearance of 17'-6" from the highest point on the roadway to the bottom of the lowest sign panel and a horizontal clearance of 7'-3" from the edge of the shoulder to the center of the column at the open shoulder foundation. To ensure proper clearances, dimensions of the structure that affect clearances shall be verified by the Contractor by field measurements before foundation construction begins.

Sign supports shall be erected so that the sign face is plumb and at right angles to the road unless otherwise directed by the Engineer.

Subsequent to erection, any damaged galvanized coating shall be field repaired in accordance with Subsection 807.88.

METHOD OF MEASUREMENT: Relocation of Existing Overhead Sign Structure will be measured by the unit, including foundations, complete in place. One unit consists of the removal and reinstallation of the existing structure on new foundations, brackets, bolts, washers, nuts, and other hardware necessary to complete the installation of the sign structure and sign panel(s) or VMS. The fabrication and installation of the sign panels will be paid for under Section 725 or 726.

BASIS OF PAYMENT: Relocation of Existing Overhead Sign Structure completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Relocation of Existing Overhead Sign Structure which price shall be full compensation for removing existing overhead sign structure and re-installing the structure including sign framing, supporting structures, and new concrete foundations; for excavation, backfill, compaction, removal and disposal of surplus materials, and replacement of existing surfaces; and for all materials, including the open shoulder fountation, labor, tools, equipment, and incidentals necessary to complete the work.

Pay Item	**Pay Unit**
Relocation of Existing Overhead Sign Structure (__)	Each

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OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT

Description. This item shall consist of furnishing and installing Omni-directional breakaway sign supports for roadside mounted signs according to these specifications and to the dimensions and details and at the locations shown on the plans or as directed.

Materials. The posts shall conform to the Standard Specification for Electric-Resistance-Welded Metallic-Coated Carbon Steel Mechanical Tubing, ASTM designation A787.The length of each post for each sign shall be verified by the Contractor before ordering to meet the existing field conditions and to conform to the specified sign mounting heights.

The Contractor shall submit to the Engineer certified mill test reports showing chemical analysis and physical tests. The square sign post tubing shall be hot-dipped galvanized conforming to ASTM specification A653 designation G90. The weld is zinc-coated after scarfing operation. The cross section of the post shall be square tubing formed of 10 gauge steel, carefully formed into size, and induction welded in such a manner that neither weld nor flash shall interfere with telescoping properties.

Holes shall be 3/ 8” in diameter on 1" centers for the entire length of the post. Holes shall be on the center line of each side in true alignment and opposite to each other. All holes and sheared ends shall be free from burrs.

All high strength bolts, nuts, and washers shall comply with AASHTO M l64M. Shims shall be fabricated from brass shim stock or strip complying with ASTM B 36.

Concrete for footings shall comply with Section 802 for Class S concrete. The Department will perform all acceptance sampling and testing at the frequencies shown for Contractor acceptance testing in Subsection 802.06. Reinforcing steel shall comply with Section 804 for Grade 40. Footings for standard sign supports shall not be reinforced.

Hardware required for attachment of the sign(s) to the support shall comply with Section 724.

Construction Requirements. Excavation, backfill, compaction, and disposal of surplus materials shall be performed according to Section 80l. Compaction shall be accomplished to the extent necessary to prevent future settlement of the backfill. Disturbed surfaces shall be returned to the original condition.

The applicable provisions of Sections 802 and 804 shall govern the construction and installation of concrete and reinforcing steel.

Field welding will not be permitted except upon approval in writing by the Engineer. The Omni-directional breakaway sign support shall be constructed and installed at the locations shown on the plans or as directed. All sign supports shall provide a minimum vertical and horizontal clearance as shown on the plans. To ensure proper clearances, dimensions of the structure that affect clearances shall be verified by the Contractor by field measurements before fabrication begins. Sign supports shall be erected so that the sign face is plumb and at right angles

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OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT

to the road unless otherwise directed by the Engineer. Subsequent to erection, any damaged galvanized coating shall be repaired according to Subsection 807.88.

The procedure for assembly of base connection, as shown on the plans, shall be followed explicitly.

Method of Measurement. Omni-directional breakaway sign supports will be measured by the unit. One unit consists of the post(s) and all bolts, nuts, washers, brackets, and other hardware necessary to complete the installation and mount the sign(s). The fabrication and installation of the sign will be paid for under Section 725 or 726.

Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Square Omni-directional breakaway sign supports of the type specified, which price shall be full compensation for furnishing, fabricating, and installing the support; and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Omni-directional breakaway sign supports (Type__)	Each

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EDGE CARD VIDEO PROCESSOR

Section 733 Video Detector with Radio Interface of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 733.02 Materials is hereby amended by **adding** the following:

(h) **Video Processor, Edge Card -** Unit shall insert into a standard NEMA Vehicle Detector Rack taking the position of **a single four-channel, 1 1/8" wide (single width) or a single four-channel 2" wide (double width) card slot**. Unit shall output to the standard vehicle channels with the provision to add extender cards for additional detector channels. Units shall be available for one or two video detector (camera) inputs.

(i) **Video Edge Card Extender -** Unit shall insert into a standard NEMA Vehicle Detector Rack taking the position of **one card slot and be placed directly to the left of the associated Video Processor Edge Card**. Unit shall output to standard vehicle channels utilizing output channels from Video Processor Edge Card.

(j) **Vehicle Detector Rack –** Unit consists of a standard NEMA TS2 Type 2 card rack unit with power supply, of the number of channels specified. Unit shall be configured with four (4) channels occupying one card slot of the rack. Unit shall be wired to be suitable for use with two (2) or four (4) channel card rack loop detectors, edge card video detectors, or video edge card extenders. Card rack shall be supplied with double width card slots if double width cards are utilized.

(k) **Multi Port Edge Card Switch –** In lieu of providing a multi channel processor, contractor may utilize Video Processor, Edge Card with Extender Cards mounted in a Vehicle Detector Rack. When two or more Edge Cards are utilized, in order to achieve full functionality, the control and display of the Edge cards shall be combined into a single point switch allowing Ethernet, direct connect, and programming of the individual Edge Cards through a single unit. In lieu of a Multi Port Edge Card Switch, an environmentally hardened -35°C to +74°C rated 8 port RJ45 100/1000 Base-T Ethernet managed switch with power supply and patch cords shall be supplied.

(l) **Video Detector Alignment Unit –** One programming module per job, for Zoom and focus of camera, shall be provided for alignment and setup of Detector. The module shall be given to the local government upon completion of the installation. The price for this unit shall be considered included in other items of the contract.

Subsection 733.03 Construction Requirements (C) Software is hereby **deleted** and the following substituted:

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EDGE CARD VIDEO PROCESSOR

(C) Software - Software required for monitoring, setup and programming of the system shall be supplied as subsidiary to this special provision for the item "Video Processor" or "Video Processor, Edge Card", of the number of channels specified. Two licensed copies shall be required for the job. Software shall be windows based and operate from an IBM compatible, laptop with Windows XP or later operating system. If other programming device is required, one unit shall be supplied and it shall be considered subsidiary to this special provision.

Subsection 733.04 Method of Measurement is hereby amended by **adding** the following:

(i) Video Processor, Edge Card of the number of inputs specified shall be measured by the unit.

(j) Video Edge Card Extender shall be measured by the unit.

(k) Vehicle Detector Rack of the number channels specified shall be measured by the unit.

(l) Multi Port Edge Card switch is included in other items of the contract.

Subsection 733.05 Basis of Payment is hereby amended by **adding** the following:

(i) Video Processor, Edge Card - Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price for Video Processor, Edge Card of the number inputs specified; which price shall be full compensation for providing and installing the device, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.

(j) Video Edge Card Extender - Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price for Video Edge Card Extender; which price shall be full compensation for providing and installing the device, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.

(k) Vehicle Detector Rack - Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price for Vehicle Detector Rack of the number channels specified; which price shall be full compensation for providing and installing the device, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools and incidentals necessary to complete the work. Controller cabinet modifications, and removal of equipment inside the cabinet, and

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other work necessary for installation of the device shall be considered included in the price of this item.

(l) **Multi Port Edge Card Switch -** Work completed and accepted under this item will not be paid separately, but shall be included in the cost of other items of the contract where two or more Video Processors, Edge Card are utilized in the cabinet.

(m) **Video Detector Alignment Unit -** Work completed and accepted under this item will not be paid separately, but shall be included in the cost of other items of the contract.

Payment will be made under:

Pay Item	**Pay Unit**
Video Processor, Edge Card (___ Camera)	Each
Video Edge Card Extender	Each
Vehicle Detector Rack (___ channel)	Each

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VIDEO DETECTOR ROTATION

DESCRIPTION. This item consists of rotating the existing video detectors to aim at new video zones at various locations as shown on the plans and directed by the Engineer.

MATERIALS. No additional materials should be needed for the rotation.

METHOD OF MEASUREMENT. Video detector rotation shall be measured by the unit.

BASIS OF PAYMENT. Work completed, accepted and measured as provided above will be paid for at the contract unit price bids for each video detector rotated; which price shall be full compensation for equipment tools, and labor and incidentals necessary to complete the work.

Payment will be made under:

Pay item	Pay Unit
Video Detector Rotation	Each

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VIDEO DETECTOR (COLOR)

Section 733 Video Detector with Radio Interface of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first sentence of Subsection 733.02, Materials. (a) Video Detector is deleted and the following substituted therefore:

All video detectors shall consist of a color (CLR) video camera with electro-mechanically operated optical zoom lens, cable, manual pan and tilt bracket, wiring harness and all other accessories.

Subsection 733.04 Method of Measurement (a) is deleted and the following substituted therefore:

(a) Video Detector of the type specified shall be measured by the unit.

Subsection 733.05 Basis of Payment. (a) Video Detector is hereby deleted and the following substituted therefore:

Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price bid per each for Video Detector of the type specified which price shall be full compensation for providing and installing the device, wiring and testing, aligning the zones; and shall also be for all labor equipment, tools and incidentals necessary to complete the work.

The following Pay Item Video Detector (CLR) is added to Subsection 733.05 Basis of Payment:

Payment will be made under:

Pay Item	**Pay Unit**
Video Detector (CLR)	Each

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ARCHITECTURAL FINISH

Description. This item shall consist of providing a pattern finish to concrete surfaces in accordance with these specifications and in conformity with the locations, dimensions, and lines shown on the plans.

General. The pattern shall be Ashlar Stone or approved equal. Prior to construction, the Contractor shall submit a work plan to the Engineer for approval showing materials, construction methods, and other features affecting the pattern construction. The work performed shall be according to the approved work plan.

(a) Ashlar Stone Finish. The Ashlar Stone pattern shall have ridges as shown in the plans and shall be approximately 1 1/2" deep. Before construction of the parapets, wingwall rails, intermediate bent columns, and MSE retaining walls, approval of the Ashlar Stone Architectural Finish will be required. Approval will be based on a sample panel with approximate dimensions of 3 feet by 6 feet, representing the back of the superstructure parapet. In lieu of a sample panel, the Engineer may accept proof of previous work performed with similar size panels and finish.

Method of Measurement. Architectural Finish will be measured by the square foot. The quantities shown on the plans for Architectural Finish will be considered as the final quantities and no further measurement will be made unless, in the opinion of the Engineer or upon evidence furnished by the Contractor, substantial variations exist between quantities shown on the plans and actual quantities due to changes in alignment or dimensions or to apparent errors.

Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square foot for Architectural Finish, which price shall be full compensation for furnishing materials; form liners; forms; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Architectural Finish	Square Foot

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TEXTURED COATING FINISH

Subsection 802.19 Finishing Concrete Surfaces of the Standard Specifications, Edition of 2014, is modified as follows:

(a) General. After the third paragraph, add:

The Contractor shall use a Class 3, Textured Coating Finish (Smooth Texture) on some parts of Bridge Nos. 07499 and 07500. All surfaces shall be cleaned as necessary for bonding of the finish. Class 1 or Class 2 Protective Surface Treatment shall not be used on surfaces where textured coating finish is specified.

(b) (3) Class 3, Textured Coating Finish. Delete the second paragraph and replace with:

The Contractor shall furnish a small quantity of the materials for textured coating finish in the specified colors for use on a designated test area. Color adjustment may be required as directed by the Engineer and may require application to additional test areas. The final colors used on the project shall be as approved by the Engineer. The color of the textured coating finish from Federal Color Standard 595 B and the areas it is to be applied shall be as follows:

33522, equal or close to Shade Brown:

- Exposed surfaces of intermediate bents, excluding top of cap.
- Exposed surfaces of end bents, but excluding the inside face and top of wingwall rail, top of backwall and cap, front face of backwall between exterior girders, and parapet enhancement.
- Outside face and top of parapet rails, excluding parapet enhancement.
- Outside faces of the slab and the undersides of the slab outside exterior girders.
- Exposed surfaces of retaining walls excluding Arkansas Form Insert recess.
- Other areas as directed by the Engineer.

30219, equal or close to Shade Brown:

- Parapet Enhancement on outside face of parapet rails and wingwall rails including chamfers.
- Arkansas Form Insert recess on retaining walls including chamfer.

Textured coating finish of exposed surfaces of the substructure and retaining walls shall be applied after the final ground line of the cut or embankment has been established.

TEXTURED COATING FINISH

Method of Measurement. Textured Coating Finish applied at the direction of the Engineer will be measured by the square yard. Measurement will be made of the actual area covered as directed. The quantities shown on the plans for Textured Coating Finish will be considered as the final quantities and no further measurement will be made unless, in the opinion of the Engineer or upon evidence furnished by the Contractor, substantial variations exist between quantities shown on the plans and actual quantities due to changes in alignment or dimensions or to apparent errors.

Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square yard for Textured Coating Finish, which price shall be full compensation for furnishing materials; for cleaning surfaces and application; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Textured Coating Finish	Square Yard

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RETAINING WALLS

Description. This item shall consist of the construction of mechanically stabilized earth (MSE) walls in accordance with these specifications and in conformity with the locations, dimensions, lines and grades shown on the plans. Modular Block wall systems will not be considered. All references to Division, Section, and Subsection refer to the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition).

General. The same type retaining wall system shall be used at all locations. Any approved retaining wall system, except Modular Block Walls, on the Qualified Products List (QPL) will be acceptable provided that:

1. The maintenance-free life expectancy shall be at least seventy-five (75) years.
2. Retaining walls shall be designed by an Arkansas Registered Professional Engineer. The design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications and this Special Provision.
3. The basic wall geometry, including top and bottom of wall face, grade lines, length, and limits of walls shall be as shown on the plans.
4. Structural elements of the wall shall not interfere with the location of roadway drainage structures and end bent piling as shown on the plans.
5. An architectural finish as shown in the plans, or approved equivalent, will be required for the concrete wall face.
6. The wall system design shall comply with requirements for global stability as determined by the Department.
7. The passive resistance of the soil at the front face of the wall shall be neglected in the analysis of external stability for sliding.
8. The factored bearing resistance shown in the plans is recommended for the existing foundation material based on an estimated width of the reinforced zone. The Department will evaluate factored bearing pressures in excess of the recommended factored bearing resistance and in any undercut areas upon submittal of the wall system design.

Materials. (a) Concrete Facing Panels. The reinforced concrete facing panels shall be rectangular or square in shape, fabricated in accordance with Subsection 802.21 and Section 804. The materials shall meet the requirements of Subsections 802.02 and 804.02 with the following additions and modifications:

RETAINING WALLS

1. The Contractor shall submit his concrete mix design to the Resident Engineer for approval. The Portland cement concrete shall have a minimum 4,000 psi compressive strength at 28 days; with a minimum cement factor of 6 bags per cubic yard, an air content of 6% ± 2%, and a maximum aggregate size of 1 inch.
2. The units shall be fully supported by the forms until the concrete reaches a minimum compressive strength of 2,500 psi as evidenced by test cylinders cured in the same manner as the panels and tested in accordance with AASHTO T 22.
3. All units shall be handled, stored, and shipped in such a manner as to eliminate the dangers of chipping, discoloration, cracks, fractures, and excessive bending stresses. Stored panels shall be supported in firm blocking to protect the panel connection devices and the exterior finish.
4. Panel connection devices shall be positioned within a tolerance of 1 inch. Panel squareness, as determined by the difference between the two diagonals, shall not exceed 0.5 inch.
5. Units shall be rejected because of failure to meet any of the requirements specified above. In addition, any or all of the following shall be sufficient cause for rejection:
   - Imperfections.
   - Honeycombing or open texture concrete.
   - Cracked or severely chipped panels.
   - Color variation on front face of panel due to excess form oil or other causes.
6. The manufacturer shall have a Quality Control program whereby representative samples of raw materials (cement, aggregates, reinforcement) are tested and/or reviewed for conformity to specifications. In addition, quality control tests (slump, air content, concrete temperature, compressive strength, and gradations, as applicable) shall be conducted by the manufacturer during casting operations. Quality control tests shall be conducted in accordance with the AASHTO Testing Procedures. The frequency of quality control tests shall be a minimum of one (1) set of tests per pouring day for each type product (panels or coping).

   Records of materials used in the manufacture of reinforced concrete facing panels and quality control tests shall be maintained by the manufacturer. The Department shall reserve the right to review records for compliance with all applicable specifications and to reject any non-conforming units. Reinforced concrete facing panels <u>shall</u> <u>not</u> be shipped <u>nor</u> incorporated into the job until all testing has been completed. Copies of the manufacturer's quality control and inspection records shall be provided to the Engineer upon request.

   The Department shall reserve the right to observe all manufacturing processes and conduct random quality assurance tests to determine compliance. If deemed necessary, drilled cores shall be taken at the direction of the Engineer to verify the compressive strength.

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All reinforced concrete facing panels manufactured for use on Department projects shall be legibly marked on their back side with the cast date and a distinct identification number.

7. The manufacturer shall furnish a Certificate of Delivery for each shipment stating that the listed products conform to all applicable specifications. The information on the Certificate of Delivery shall include the state job number (or state purchase order number), consignee, destination, number of pieces, cast dates, identification numbers, and plant of origin. One copy of the Certificate of Delivery and shipping papers shall be furnished to the Engineer.

(b) Soil Reinforcing and Attachment Devices. All reinforcing and attachment devices shall be carefully inspected to ensure they are true to size and free from defects that may impair their strength and durability. Metallic reinforcements and attachment devices shall be galvanized in accordance with AASHTO M 111.

(c) Select Granular Backfill. (1) Method A Construction. When Method A Construction is shown in the plans, all backfill material used within the reinforcement zone shall be granular having an angle of internal friction greater than 28 degrees as determined by the standard direct shear test AASHTO T-236 on the portion finer than the No. 10 sieve, using a sample of the material compacted to 95 percent of AASHTO T-99 and shall have no cohesion. Aggregates meeting the material requirements of Section 302 for Selected Material (Class SM-1) or the material requirements of Section 303 for Aggregate Base Coarse (Class 7) are acceptable backfill materials and shall be placed and compacted in accordance with Subsections 210.07, 210.09, and 210.10. The Contractor shall perform quality control and acceptance sampling and testing of the backfill in accordance with Section 306, with the exception that the minimum frequency of acceptance testing shall be one lot test for density, moisture content, gradation, and plasticity index for each 3,000 cubic yards of backfill material placed except that at least one set of tests shall be performed on each layer of backfill. If the material used for Select Granular Backfill is Aggregate Base Coarse (Class 7) and the source remains consistent, testing requirements for gradation and plasticity index shall meet the minimum frequency of one test per 3,000 cubic yards. The Engineer may waive PI testing as outlined in Section 306. Construction requirements outlined in Subsection 302.02 shall apply.

Drainage fill material placed immediately behind the wall shall conform to the requirements of a Class 3 mineral aggregate as specified in Subsections 403.01 and 403.02. As shown on the plans, drainage fill material shall be placed for a minimum width of 12 inches behind the wall, for the full height of wall, in 10 inch loose lifts and compacted in such a manner as to avoid any damage or distortion of wall materials or wall alignment. The Contractor shall perform quality control and acceptance sampling and testing of the drainage fill material in accordance with Section 306, with the exception that the minimum frequency of acceptance testing shall be one lot test for gradation and decantation loss for each 500 cubic yards of drainage fill material.

The Contractor shall sample and test the backfill material for Dry Rodded Unit Weight in accordance with AASHTO T-19 and angle of internal friction prior to wall construction. The angle of internal friction used in the wall system design shall not exceed the angle of internal friction of the backfill material within the reinforcement zone. The Contractor shall conduct one additional shear test on a sample taken during the wall construction at a location as determined

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by the Engineer. If the backfill material source changes and/or material properties change during wall construction from the original sample tested, the angle of internal friction shall be re-verified. If the additional test result or the re-verified test result is less than the value utilized in the design of the wall, the material shall be removed and replaced with acceptable backfill material.

(2) Method B Construction. When Method B Construction is shown in the plans, all backfill material used within the reinforcement zone shall be mechanically crushed natural rock or stone of igneous, sedimentary, and/or metamorphic origin produced from a solid geological formation by quarrying methods meeting the requirements of Subsection 802.02(c) Coarse Aggregate for Class S concrete. The direct shear requirements may be waived in lieu of an assumed 34 degree soil angle of internal friction. The Contractor shall perform quality control and acceptance testing for gradation at a frequency of one test per 3,000 cubic yards. The Contractor shall sample and test the backfill material for Dry Rodded Unit Weight in accordance with AASHTO T-19 prior to wall construction.

(d) Filter Fabric. All joints between panels on the back face of the wall shall be covered with a geotextile filter fabric meeting the requirements of Subsection 625.02, Type 2. The minimum width and lap shall be 12 inches. Additional Type 2 geotextile filter fabric shall be placed as shown in the plans. The geotextile fabric and reinforcing elements used in the wall construction shall be able to resist deterioration when exposed to the properties of the concrete in the wall facing panels and the backfill material selected. Geotextile fabric shall be protected from sunlight during storage.

(e) Coping. Concrete for coping shall comply with the requirements of Section 802 for Class S(AE) Concrete. Reinforcing steel shall comply with the requirements of Section 804.

(f) Buy America Requirements. All iron and steel material used on Department projects must be in compliance with "Buy America" requirements and Subsection 106.01. All manufacturing processes of the iron or steel in a product (i.e., smelting/remelting, and any subsequent process which alters the steel material's physical form or shape or changes its chemical composition) must occur within the United States to be considered of domestic origin. This includes, but is not limited to, such processes such as rolling, extruding, machining, bending, grinding, drilling, and applying coatings. The use of pig iron or processed, pelletized, and reduced iron ore manufactured outside of the United States is permitted in the domestic manufacturing process for steel and/or iron materials. All steel and iron mill test reports must include a statement certifying that all manufacturing processes for the iron or steel product occurred in the United States. Each supplier/fabricator of an intermediate product shall also certify that the product complies with "Buy America" requirements.

Working Drawings. At least 30 calendar days prior to fabrication of the concrete panels, the Contractor shall submit four (4) copies of design calculations, working drawings, and material and construction specifications to the Resident Engineer for review. This will be used to verify compliance with design requirements. The drawings shall include details that provide for flexibility, differential settlement, and aesthetics at changes in direction of the wall alignment. Test results for gradation, plasticity index, unit weight and angle of internal friction of the Select Granular Backfill shall be submitted with the Working Drawings for all proposed sources. These

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results shall state Method A Construction or Method B Construction. The wall design engineer shall review all proposed Select Granular Backfill sources and shall state in writing that the materials meet the wall manufacturer's recommendations regarding Electrochemical Properties. The above verification process shall not relieve the Contractor of any of his responsibility under the contract for the successful completion of the work.

Architectural Finish. The Ashlar Stone pattern shall have ridges approximately 1" deep. Before production of the precast concrete panels may begin, approval of the architectural finish will be required. Approval will be based on a sample panel with approximate dimensions of 6 feet by 6 feet. In lieu of a sample panel, the Engineer may accept proof of previous work performed with similar size panels and finishes. Prior to construction of any panels, a work plan showing the materials, construction methods, name and pattern number of form liner manufacturer, and other features affecting the finish shall be submitted to and approved by the Engineer. All panels shall be constructed according to the approved plan.

Construction. The Contractor will be required to have an experienced manufacturer's representative knowledgeable in the design and construction of the retaining wall system available throughout the construction period. The Construction Method shall not change during wall construction. The Contractor shall furnish a certification that the components of the wall system were manufactured in compliance with the approved design and that the materials furnished comply with the specifications.

Prior to wall construction, the foundation shall be compacted as directed by the Engineer. Any unsuitable foundation material shall be excavated and backfilled according to the undercutting requirements of this special provision. At each foundation level, a cast-in-place unreinforced concrete leveling pad shall be provided. The leveling pad shall be in place a minimum of 24 hours before panel erection begins and have a minimum earth cover as shown on the plans. Concrete for the leveling pad shall comply with the requirements of Section 802 for Class A or higher strength concrete as required by the wall supplier's construction requirements.

Precast concrete panels shall be placed so that their final position is vertical as shown on the plans. As drainage and backfill material are placed behind the panels, the panels shall be maintained in position by means of temporary wedges or bracing according to the wall supplier's recommendations. Concrete facing vertical tolerances and horizontal alignment tolerances shall not exceed 0.75 inch per ten (10) feet of length. During construction, the maximum allowable offset in any panel joint shall be 0.75 inch. The completed overall vertical tolerance of the wall (top to bottom) shall not exceed 0.5 inch per ten (10) feet of wall height.

As shown on the plans, drainage fill material shall be placed for a minimum width of 12 inches behind the wall, for the full height of the wall, in 10 inch loose lifts and compacted in such a manner as to avoid any damage or distortion of wall materials or wall alignment.

Select Granular Backfill placement shall closely follow the erection of each lift of panels. Backfill material within the reinforcement zone shall be compacted and placed in conformance with the applicable provisions of Subsection 302.03. At each reinforcement level, the backfill shall be placed to the level of the connection. Backfill placement methods near the facing shall assure that no voids exist directly beneath the reinforcing elements.

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Backfill shall be placed in such a manner as to avoid any damage or disturbance of the wall materials or misalignment of the facing panels or reinforcing elements. Any damage or distortion of the wall materials during backfill placement shall be corrected at the Contractor's expense. Construction traffic will not be permitted on wall reinforcement unless a minimum backfill cover of 8 inches is provided.

The Contractor shall be responsible for preventing surface water or rainwater from damaging the retaining walls during construction. This shall include shaping the backfill to prevent water from ponding or flowing on the backfill or against the wall face. Any damage or movement caused by erosion, sloughing, or saturation of the retaining wall or embankment backfill shall be repaired at the Contractor's expense.

Unless otherwise noted in the plans, the exposed surfaces of the coping on the top of the wall shall receive a Class 2 Rubbed Finish in accordance with Subsection 802.19.

Undercutting. All material within any undercut areas shown in the plans shall be excavated to the limits shown. Additional soft and unstable materials shall be excavated as directed by the Engineer. Unless otherwise shown in the plans, all undercut areas shall be backfilled with granular material meeting the requirements specified in the plans. The granular backfill material shall be placed and compacted in accordance with Subsections 210.07, 210.09 and 210.10. The Contractor shall perform quality control and acceptance sampling and testing of the backfill in accordance with Section 306, with the exception that the minimum frequency of acceptance testing shall be one lot test for density, moisture content, gradation and plasticity index for each 3000 cubic yards of backfill material placed except that at least one set of tests for density and moisture content shall be performed on each layer of backfill.

When Stone Backfill is shown in the plans, all undercut areas shall be backfilled with material meeting the requirements of Section 207 Stone Backfill. The Stone Backfill shall be placed, measured and paid in accordance with Section 207.

Method of Measurement. Retaining walls will be measured by the square foot of front surface area between the top of the leveling pad at the face of the wall and the top of the wall including any coping required.

All excavation within the limits of any undercut areas will be measured as Unclassified Excavation unless Stone Backfill is specified in the plans. All excavation directly over any undercut areas, outside the limits of the reinforcement zone, within the reinforcement zone and for the leveling pad will be measured as Unclassified Excavation.

All backfill and drainage fill material placed behind retaining walls within the reinforcement zone will be measured as Select Granular Backfill in its final position in accordance with Subsection 210.12(c).

All backfill placed directly over the limits of any undercut areas and outside the limits of the reinforcement zone will be measured as Compacted Embankment. All backfill within the limits of any undercut areas will be measured as shown in the plans.

RETAINING WALLS

Basis of Payment. Retaining walls completed, accepted and measured as provided above will be paid for at the contract unit price bid per square foot for Retaining Wall, which price shall be full compensation for designing; for quality control and acceptance sampling and testing; for providing the architectural finish; for furnishing all materials except backfill and drainage fill materials but including pipe underdrains and joint materials; for constructing the leveling pad, the wall, and the coping; and for all labor, equipment, tools, and incidentals necessary to complete the work.

All excavation within the limits of any undercut areas will be paid for as Unclassified Excavation unless Stone Backfill is specified in the plans. All excavation directly over any undercut areas outside the limits of the reinforcement zone, within the reinforcement zone and for the leveling pad will be paid for as Unclassified Excavation in accordance with Section 210. All backfill within the limits of any undercut areas will be paid for as shown in the plans.

All backfill and drainage fill material placed behind retaining walls within the reinforcement zone, including quality control and acceptance sampling and testing, will be paid for as Select Granular Backfill in accordance with this Special Provision.

All backfill directly over the limits of any undercut areas and outside the limits of the reinforcement zone, including quality control and sampling and testing, will be paid for as Compacted Embankment in accordance with Section 210.

The Contractor shall comply with applicable Federal, State, and local laws governing safety in accordance with Subsection 107.01(b) in any and all excavation and/or shoring operations. Any shoring and additional excavation with replacement backfill outside the reinforcement zone or outside the limits and not directly over any undercut areas will not be paid for directly, but will be considered subsidiary to the unit price bid per square foot for Retaining Wall.

Payment will be made under:

Pay Item	**Pay Unit**
Retaining Wall	Square Foot
Select Granular Backfill	Cubic Yard

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)

DESCRIPTION. This item shall consist of providing a pattern finish to concrete surfaces in accordance with these specifications and in conformity with the locations, dimensions, and lines shown on the plans.

GENERAL. The pattern shall be Ashlar Stone or approved equal. Prior to construction, the Contractor shall submit a work plan to the Engineer for approval showing materials, construction methods, and other features affecting the pattern construction. The work performed shall be according to the approved work plan.

(a) Ashlar Stone Finish. The Ashlar Stone pattern shall have ridges as shown in the plans and shall be approximately 1 5/8" deep. ***An additional 1 ½" of concrete will be required on the exposed face of the wall with a maximum form liner depth of 2" to provide a minimum clearance of 1 ½" cover to reinforcing steel.*** Before construction of the retaining wall or Concrete Walk (Type Special), approval of the Ashlar Stone Architectural Finish will be required. Approval will be based on a sample panel with approximate dimensions of 6 feet by 6 feet. In lieu of a sample panel, the Engineer may accept proof of previous work performed with similar size panels and finish. The retaining wall and Concrete Walk (Type Special) shall be constructed according to the approved plan.

METHOD OF MEASUREMENT. Architectural Finish will be measured by the square foot. The quantities shown on the plans for Architectural Finish will be considered as the final quantities and no further measurement will be made unless, in the opinion of the Engineer or upon evidence furnished by the Contractor, substantial variations exist between quantities shown on the plans and actual quantities due to changes in alignment or dimensions or to apparent errors.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square foot for Architectural Finish, which price shall be full compensation for furnishing materials; form liners; forms; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

PAY ITEM	PAY UNIT
Architectural Finish	Square Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

TEXTURED COATING FINISH (CAST-IN PLACE RETAINING WALLS)

Subsection 802.19 Finishing Concrete Surfaces of the Standard Specifications, Edition of 2014, is modified as follows:

(a) General. After the third paragraph, add:

The Contractor shall use a Class 3, Textured Coating Finish (Smooth Texture) on the exposed surfaces of retaining walls and Concrete Walk (Type Special) as designated in the Plans. All surfaces shall be cleaned as necessary for bonding of the finish. Class 1 or Class 2 Protective Surface Treatment shall not be used on surfaces where textured coating finish is specified.

(b) (3) Class 3, Textured Coating Finish. Delete the second paragraph and replace with:

The Contractor shall furnish a small quantity of the materials for textured coating finish in the specified colors for use on a designated test area. Color adjustment may be required as directed by the Engineer and may require application to additional test areas. The final colors used on the project shall be as approved by the Engineer. The color of the textured coating finish from Federal Color Standard 595 B applied to all exposed surfaces shall be as follows:

Brown, equal or close to Shade 30277.

Textured coating finish of exposed surfaces of retaining walls shall be applied after the final ground line of the cut or embankment has been established.

Method of Measurement. Textured Coating Finish applied at the direction of the Engineer will be measured by the square yard. Measurement will be made of the actual area covered as directed. The quantities shown on the plans for Textured Coating Finish will be considered as the final quantities and no further measurement will be made unless, in the opinion of the Engineer or upon evidence furnished by the Contractor, substantial variations exist between quantities shown on the plans and actual quantities due to changes in alignment or dimensions or to apparent errors.

Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square yard for Textured Coating Finish, which price shall be full compensation for furnishing materials; for cleaning surfaces and application; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Textured Coating Finish	Square Yard

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

DRILLED SHAFT FOUNDATIONS

Description. This work includes the furnishing of all materials and the construction of foundations consisting of reinforced concrete shafts placed within drilled excavations. Such foundations shall be constructed in accordance with the details and governing dimensions shown on the plans, the Standard Specifications, this special provision, and as directed by the Engineer.

Construction Experience. The drilled shafts on this project shall be constructed by a contractor or specialty subcontractor experienced with drilled shaft construction. The Contractor shall submit a project reference list to the Engineer for approval verifying the successful completion by the Contractor or specialty subcontractor of at least three separate foundation projects with shafts of diameters and depths similar to or larger than those shown in the plans, and ground conditions similar to those identified in the Contract. A brief description of each listed project shall be provided along with the name and current phone number of the project owner or the owner's Contractor.

The Contractor shall submit a list identifying the on-site supervisors and drill rig operators potentially assigned to the project to the Engineer. The list shall contain a brief description of each individual's experience in shaft excavation operations and placement of assembled steel reinforcing bar cages and concrete in shafts. The individual experience lists shall be limited to a single page for each supervisor or operator.

1. On-site supervisors shall have a minimum of two (2) years experience in supervising construction of shaft foundations of similar size (diameter(s) and depth(s)) and scope to those shown in the plans, and similar geotechnical conditions to those described in the boring logs. Work experience shall be direct supervisory responsibility for the on-site shaft construction operations. Project management level positions indirectly supervising on-site shaft construction operations are not acceptable for this experience requirement.
2. Drill rig operator shall have a minimum of one (1) year experience in construction of shaft foundations.

The Engineer may suspend the shaft construction if the Contractor substitutes unapproved personnel. The Contractor shall be fully liable for the additional costs resulting from the suspension of work, and no adjustments in contract time resulting from the suspension of work will be allowed.

Pre-Construction Meeting. A pre-construction meeting shall be scheduled by the Engineer to be held after receipt and review of the complete work plan and construction experience submittals. The Engineer; the Contractor, including their Superintendent; the specialty subcontractor, including the listed onsite supervisor, shall attend. Attendance is mandatory. All other parties to be involved with the construction or testing of the drilled shaft foundations may

DRILLED SHAFT FOUNDATIONS

be represented. The meeting will be conducted to clarify the requirements of the work, to coordinate the construction schedule and activities, and to identify the contractual relationships and the delineation of responsibilities amongst the parties involved.

Materials. (a) Concrete. All concrete shall be Class S with a minimum 28-day compressive strength of 3,500 psi and shall conform to Section 802 unless modified herein.

The slump of the drilled shaft concrete, at time of placement, shall be 7 inches ± 1 inch for concrete placed in the dry or 8 inches ± 1 inch for concrete placed underwater. The maximum water cement ratio specified in Subsection 802.05 shall not be increased. The aggregate used shall meet the sieve requirements set by AASHTO M 43, number 7. Approved admixtures may be used to obtain desired workability, flow, and anti-segregation properties.

Trial Batch: Each concrete mix design to be used in the drilled shafts shall be submitted to the Engineer a minimum of 10 business days prior to preparing a trial batch. A trial batch for each concrete mix design shall be prepared using the specific materials submitted in the mix design, including any admixtures, that are intended for use on the job. Each submitted mix design shall meet the slump requirements at the time of placement and shall maintain a slump of 6 inches or greater for the anticipated placement time stated in the Contractor's Drilled Shaft Work Plan plus one hour. The Contractor shall prepare a plant batch of at least 3 cubic yards or one-third the rated capacity of the mixer, whichever is greater. The trial batch, including all sampling and testing, shall be accomplished by the Contractor under the observation of the Engineer. The Contractor and Engineer shall sample and test the trial batch for compliance with the specifications for slump and compressive strength. Additional sampling and testing of the trial batch for slump loss shall be according to the following procedure:

1. The proposed mix shall be prepared for the slump loss test at a temperature consistent with ambient and concrete temperatures expected during actual concrete placement.
2. After initial mixing of 70 to 100 revolutions in accordance with Subsection 802.08, the slump, concrete temperature, and ambient temperature shall be determined. The slump shall be within the required specifications. The test start time is initiated when batch water is introduced to the cement of the mixture (the normal batch time that will be recorded on each concrete delivery ticket).
3. The mix shall remain in the mixer truck, which shall spin at minimum speed for the anticipated or actual time it will take for the mixer truck to travel to the job site. After this time period the mix will again be tested for slump, concrete temperature, and ambient temperature. If a higher slump is desired based on the results of this test, water may be added in accordance with Subsection 802.08, provided that the maximum water to cement ratio and/or the slump does not exceed the limits established by the specifications. The time and amount of water added shall be recorded on the batch ticket.
4. Once the desired slump is obtained a one cubic yard sample of the mixture shall then be deposited into a plastic lined form measuring 3' x 3' x 3' in interior dimensions. A plastic-lined hole in the ground of approximately the same dimensions may be used. The surface of the concrete mixture shall be covered with plastic to prevent

DRILLED SHAFT FOUNDATIONS

evaporation. The form shall not be exposed to direct sunlight for the entire duration of the slump loss test.

5. Using the concrete mixture in the form, tests shall be performed for slump, concrete temperature, and ambient temperature at intervals of 30 minutes until the slump is 6 inches or less, or for the anticipated placement time of the shaft plus one hour. In no case shall slump tests be performed for less than 4 hours. The top 6 inches of the concrete shall be thoroughly mixed using a scoop or shovel immediately prior to each set of tests. Plastic shall remain in place to cover the mixture between test intervals.

A record of the results of all tests performed, including the time of each test, along with a copy of the mix design and a copy of the batch ticket shall be submitted to the Engineer for review and approval.

(b) Reinforcing Steel. Reinforcing steel shall be Grade 60 conforming to the requirements of Section 804.

(c) Casing. Temporary casing shall conform to ASTM A252, Grade 2 or Grade 3. Permanent casing shall conform to ASTM A252, Grade 2 or Grade 3. The walls and interior surfaces of the casings shall be carefully washed and cleaned of all sand, gravel, bonded concrete or foreign materials before use.

All casing shall be steel, watertight and of ample strength to withstand handling and/or driving stresses and the pressure of both concrete and the surrounding earth materials. All casing shall be selected by the Contractor to control dimensions and alignment of excavations within tolerances and to execute all other construction operations.

Construction. (a) Work Plan. The Contractor shall submit to the Engineer, for information and record purposes, a Work Plan for each shaft of similar type and setting at least 30 days prior to beginning construction of the drilled shafts. Where drilled shafts are to be constructed at multiple sites, a separate Work Plan shall be submitted for each site. The Work Plan shall include at a minimum:

1. A thorough and complete description of the proposed drilling equipment including cranes, drills, augers, tremies, concrete pumps, casings, etc.
2. The method of drilling and achieving shaft alignment tolerances and removing obstructions.
3. The method of installation for any permanent casings and the method of installation and removal for any temporary casings. Provisions shall be made for rigidly supporting the casings at locations where the soil that overlies rock is thin or absent or the casing extends above the ground line. The extension of permanent casing into competent rock beyond the depth required to maintain seal is not an acceptable method of rigid support.
4. Details of methods to clean and inspect the shaft excavation including the bottom of the shaft.
5. The method of supporting and centralizing the reinforcing steel.

DRILLED SHAFT FOUNDATIONS

6. Details of concrete placement for each shaft, including proposed operation procedures for pumping methods, the anticipated time required for concrete placement in each shaft, and a sample inspection form to be used for the concreting curve showing depth versus volume over the length of the shaft.
7. The sequence of drilling and time schedule for completion of each shaft including any non-destructive testing required by the plans or special provisions.
8. Preventative measures for working around any structures, railroad tracks, and utilities in the immediate vicinity.
9. The location of any work roads, detours, and traffic control devices.
10. A pollution prevention plan that shows the method of controlling the discharge of any pollutants including any water that may be used as a drilling fluid. The Contractor's pollution prevention plan will become part of the Department's Stormwater Pollution Prevention Plan. The Contractor shall ensure compliance with Section 110 of the Standard Specifications.

The drilled shafts shall be constructed in accordance with the Work Plan and no deviation shall be allowed without the written permission of the Engineer. Any change in the Work Plan shall be submitted to the Engineer at least three (3) business days before any work is begun. Acceptance of the Work Plan shall not relieve the Contractor of any other requirements in the plans and specifications.

(b) Protection of Existing Structures. The Contractor shall control his operations to prevent damage to any existing structures, utilities, and railroad tracks. Preventative measures shall include, but are not limited to, selecting construction methods and procedures that will prevent caving of the shaft excavation and monitoring and controlling the vibrations from construction activities such as the driving of casing or sheeting, or drilling of the shaft. Blasting will not be permitted.

(c) Construction Tolerances. The following construction tolerances apply to drilled shafts unless otherwise shown on the plans:

1. The center of the drilled shaft shall be within the integer value of d/15, where d is the shaft diameter in inches, of plan position in the horizontal plane at the plan elevation for the top of the shaft. In no instance shall the center tolerance be taken less than three (3) inches or more than six (6) inches.
2. The vertical alignment of a vertical shaft excavation shall not vary from the plan alignment by more than 1/4 inch per foot of depth.
3. After all the concrete in a shaft is placed, the top of the reinforcing steel cage shall be no more than four (4) inches above and no more than two (2) inches below plan position.
4. The top elevation of the shaft shall have a tolerance of plus one (1) inch or minus three (3) inches from the plan top of shaft elevation.
5. Excavation equipment and methods shall be designed so that the completed shaft excavation will have a near planar bottom. The cutting edges of the excavation

DRILLED SHAFT FOUNDATIONS

equipment shall be normal to the vertical axis of the equipment within a tolerance of ± 3/8 inch per foot of diameter.

6. The finished diameter of the shaft shall be no less than the specified diameter along the entire length of the drilled shaft.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. The Contractor shall be responsible for correcting all unacceptable shaft excavations and completed shafts to the satisfaction of the Engineer. Materials and work necessary, including engineering analysis and redesign by a Professional Engineer licensed in the State of Arkansas, to complete corrections for out of tolerance drilled shaft excavations shall be furnished without either cost to the Department or an extension of the completion date of the project.

(d) Casings. (1) Temporary Casing. When shown in the plans or as approved by the Engineer, temporary casings shall be used to prevent caving of the excavated shaft, to exclude ground water, or to create a positive seal into impervious material so that no piping of water or other materials occurs into or from the shaft excavation. The Contractor shall remove temporary casing before completion of concreting the drilled shaft. Predrilling and/or over-reaming to beyond the outside diameter of the casing may be required to install the casing.

When temporary casings are used in conjunction with permanent casings as shown in the plans or approved by the Engineer, the Contractor shall maintain both alignment of the temporary casing with permanent casing and a positive, watertight seal between the two casings during excavation and concreting operations.

Before the temporary casing is withdrawn, the level of fresh concrete in the casing shall be a minimum of 5 feet above the hydrostatic water level in the soil or the level of the drilling fluid in the annular space behind the casing, whichever is higher. As the temporary casing is withdrawn, care shall be exercised to maintain an adequate level of concrete in the casing so that fluid trapped behind the casing is displaced upward and discharged at the ground surface without contaminating or displacing the shaft concrete. Insofar as possible, casing extraction shall be done at a slow uniform rate by application of a steady vertical upward pull in the direction of the axis of the shaft. To facilitate extraction, tapping on the casing, exertion of temporary downward pressure, and slight rotation will be permitted provided care is taken to avoid harmful impacts or disturbances to the fresh concrete. Vibration or rodding may not be used to break the casing loose for extraction.

Temporary casings which become bound or fouled during shaft construction and cannot be practically removed shall constitute a defect in the drilled shaft. The Contractor shall be responsible to improve such defective shafts to the satisfaction of the Engineer. Such improvements may consist of, but are not limited to: removal of the shaft concrete and extending the shaft deeper to compensate for loss of frictional capacity in the cased zone, providing saddle shafts to compensate for capacity loss or providing a replacement shaft. All corrective measures, including redesign of the bent caused by the defective shaft, shall be done to the satisfaction of the Engineer by the Contractor without either compensation or an extension of time. In addition, no compensation will be made for the temporary casing left in place.

DRILLED SHAFT FOUNDATIONS

(2) Permanent Casing. Permanent casing shall be used when shown in the plans. The casing shall be continuous between top and bottom elevations as shown in the plans. The outside diameter of the permanent casing shall be as shown in the plans. When not specified, the outside diameter of the permanent casing shall be sufficient to produce a finished drilled shaft with a diameter no less than the specified diameter along the entire length of the shaft. The inside diameter of permanent casing shall not be greater than the specified diameter of the shaft plus 12 inches unless otherwise approved by the Engineer. Lengths of permanent casing shown on the plans are for estimating quantities only; actual lengths are to be determined in the field. All casings shall be watertight and of ample strength to withstand handling and/or driving stresses and the pressure of both concrete and the surrounding earth materials. All casings used shall be selected by the Contractor to control the dimensions and alignment of excavations within tolerances and to execute all other construction operations.

(3) Temporary Surface Casing. Temporary oversized surface casing may also be required for no more than 10 feet below top of shaft to prevent sloughing of the top of the shaft excavation. Temporary surface casings shall not be removed until after a minimum of 72 hours has elapsed since concrete placement and shall be done in a manner to not cause any damage to the finished drilled shaft. Concrete shall not be cast directly against temporary surface casing.

(e) Excavations. The Contractor shall perform the excavation required for the shafts through whatever materials encountered, to the dimensions and elevations shown on the plans or required by the site conditions. The Contractor's methods and equipment shall be suitable for the intended purpose and materials encountered. During excavation of the shafts, the Contractor shall make frequent checks on the plumbness, alignment, and dimensions of the shaft to maintain required tolerances.

Bottom of shafts shall not be founded at an elevation above that shown on the plans without the approval of the Engineer. The depth that is to be drilled shall be considered an approximation and the Engineer may order, in writing, such changes in depth as may be necessary to secure a satisfactory foundation.

After each drilled shaft excavation has been completed to planned tip elevation, the Contractor shall drill one test hole 1 ½" diameter or larger to a minimum depth of 1.5 times the shaft diameter below planned tip elevation. If voids or soil-filled cavities are encountered within this depth below the planned tip elevation, test hole drilling shall continue from the top of competent rock below the cavity and advanced to a minimum depth of 1.5 times the shaft diameter below the cavity. Conditions encountered shall be recorded and provided to the Engineer for determination of the drilled shaft tip elevation.

At the Contractor's option, one test boring may be drilled prior to the drilled shaft excavation. The test boring shall be positioned as near as practical to the centerline of the shaft. If rock is encountered at an elevation at or above the required embedment above the planned tip elevation, core drilling shall start at the top of competent rock and advanced to a minimum depth of 1.5 times the shaft diameter below the planned tip elevation. If competent rock is encountered at an elevation lower than the required embedment above the planned tip elevation, core drilling shall start at the top of competent rock and advanced to a minimum depth of the required embedment plus 1.5 times the shaft diameter. If voids or soil-filled cavities are encountered

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below the planned tip elevation, core drilling shall continue from the top of competent rock below the cavity and advanced to a minimum depth of 1.5 times the shaft diameter below the cavity.

Each test boring shall advance using rotary drilling techniques. Test borings shall use temporary casing extending through soil to the top of rock to facilitate diamond core drilling. Hollow stem augers may be considered to meet the definition of temporary casing for drilling purposes. Diamond core drilling shall be done with an NQ-size double-tube swivel-type wireline core barrel or a similar approved larger sized tube swivel-type core barrel.

A completed test boring log for each respective test boring shall be provided to the Engineer. The test boring log shall include station, offset, surface elevation, complete visual description, drilling and sampling methods; and depth of the various soil or overburden layers encountered to top of rock. The test boring log shall also include visual descriptions and conditions of the rock cores, including any voids, soil-filled cavities or other anomalies encountered; Standard Core Recovery (SCR), and Rock Quality Designation (RQD) of each core run. The rock cores shall be removed, boxed, and appropriately marked for elevation.

The test boring logs and rock core samples shall be provided to the Engineer within five business days after completion of the test boring for a determination of the drilled shaft tip elevation. If the bottom shaft elevation is lowered below planned tip elevation, additional core drilling may be required to sample rock below the new drilled shaft tip elevation.

The excavation shall be made without the use of drilling mud. Water may be used as a drilling fluid and to prevent a hydrostatic head from occurring. Drilled shaft excavation shall begin only if the Contractor can complete the excavation, perform foundation inspection and testing, and place the reinforcement and concrete as a continuous operation. If the center-to-center spacing is less than 3 shaft diameters, no two adjacent shafts shall be excavated at the same time and shafts shall not be constructed within 24 hours of the completion of an adjacent shaft. If the excavation will be subjected to vibrations from nearby activities that may cause caving, casing shall be advanced as drilling proceeds to prevent caving.

Material excavated from shafts and not used in the backfill around the compacted pier or abutment shall be disposed of in a manner approved by the Engineer and shall not be placed in a waterway or otherwise impair the efficiency or appearance of the bridge or other parts of the work. Any excavation for the shaft beyond the lines required by the plans shall be filled with material approved by the Engineer and at the Contractor's expense.

When drilled shafts are to be installed in conjunction with embankment placement, the Contractor shall construct drilled shafts after the placement of fills unless otherwise approved by the Engineer.

When drilled shafts are to be installed in conjunction with a footing, excavation to the footing elevation shall be completed before shaft construction begins unless otherwise noted in the plans or approved by the Engineer. Prior to the footing pour, the Contractor shall repair any disturbance to the footing area caused by shaft installation.

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No open excavation shall be left unattended. During non-working hours excavations shall be protected by the use of solid, safe covers that are firmly fastened in place.

The Contractor shall provide suitable access, lighting, and equipment for checking the dimensions and alignment of each permanent shaft excavation and for inspecting the excavation. Any mechanical equipment used within the excavation shall be operated by air or electricity. The use of gasoline driven engines or any device that produces toxic fumes or uses atmospheric oxygen, within the excavation for any purpose will not be permitted. All lighting shall be electric and precautions shall be taken in regard to potential short circuits of electric current within ground water. The Contractor shall not allow workers to enter the shaft excavation for any reason, unless both a suitable casing has been installed and adequate safety equipment and procedures have been provided to the workers entering the excavation.

The Contractor shall check the dimensions and alignment of the shaft excavation under the direction of the Engineer. Final shaft depths shall be measured with suitable weighted tape or other approved methods after final cleaning of the excavation.

No concrete shall be placed until the Engineer approves the condition of the excavation. Prior to placing concrete, the shaft excavation shall be cleaned so that a minimum of 50 percent of the base area will have less than ½ inch of sediment and at no place more than 1 ½ inch. The Contractor shall be responsible for showing that the excessive loose material has been removed from the excavation. Inspection of the bottom of the excavation shall be by camera or other suitable means approved by the Engineer. When the shaft inspection is by camera it shall be capable of viewing the bottom of the excavation at a resolution suitable for determining the bottom condition whether wet or dry construction methods are used. All expenses for inspection shall be included in the price bid for “Drilled Shaft (__" Dia.)”.

If the elevation of the top of shaft is below ground level at the time of concrete placement, an oversized temporary surface casing from ground elevation to a point below the top of the shaft will be required to control caving of any substance into freshly placed concrete and to facilitate construction. The oversized surface casing shall be removed and backfill placed in accordance with Subsection 801.08.

(f) Reinforcing Steel. The reinforcing steel cage shall be completely assembled and shall be placed as a unit immediately after the shaft excavation is inspected and accepted, and prior to concrete placement. The cage will consist of the reinforcing shown in the plans, cage stiffener bars as required, spacing devices, and any other appurtenances required to maintain alignment, shape, and clearances. Any internal stiffeners shall be removed as the cage is lowered into the excavation.

The minimum clearance between the edge of the drilled shaft and the vertical reinforcing steel and the minimum length of steel required for lap with the column steel shall be as shown in the plans.

The Contractor shall be responsible for the proper bracing of the reinforcing cage. This bracing shall be sufficient to permit assembly above ground and placing in the shaft as a unit

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without inducing deforming, twisting, or bending stress. Welding of reinforcing bars will not be permitted.

Concrete spacer blocks shall not be used on the reinforcing cages. Epoxy coated metal "chair" type spacers, epoxy coated bent pieces of steel bars, or high density plastic alignment systems shall be used to ensure concentric spacing of the cage inside the shaft. Spacers shall be placed at least at quarter points around the circumference of the cage, and at a longitudinal spacing not exceeding 20 feet or 2.5 times the shaft diameter, whichever is less. The spacer sizes shall be varied as necessary along the length of the shaft to maintain a concentric spacing within the cased and uncased portions of the shaft.

The cage shall be supported from the top by some positive method to minimize uplift or downward slump during concrete placement and/or extraction of the casing. A minimum of one-half of the vertical bars shall be supported from the top. The support shall be concentric with the cage to prevent racking and distortion of the steel. Setting the cage on the socket bottom without support will not be permitted.

The elevation of the top of the steel cage shall be carefully checked before and after the concrete is placed. Displacement of the steel beyond the specified tolerances will be cause for rejection.

(g) Concrete. The work shall be performed in accordance with the provisions of Section 802 and in conformance with the requirements herein.

The maximum sublot size for acceptance sampling and testing of drilled shaft concrete by the Contractor shall be 100 cubic yards or one drilled shaft.

At the time concrete is placed, the excavation shall be free from accumulated seepage water (less than 3 inches above bottom of shaft and 12 inches per hour inflow) unless an underwater pour is authorized by the Engineer. Concrete shall be placed as soon as possible after completion of the excavation and the inspection and setting of the reinforcing cage. During concrete placement, the Contractor shall limit the difference in elevation of the concrete inside and outside the steel reinforcing cage to one (1) foot maximum. Concrete placement operations shall proceed in a continuous operation from the bottom of the shaft to the top of the shaft, unless a shaft construction joint below the top of the shaft is specified in the plans. After the concrete level has reached the top of the shaft, it will be forced to overflow until only fresh uncontaminated concrete is left in the shaft, unless a shaft construction joint below the top of the shaft is specified in the plans.

If a shaft construction joint below the top of the shaft is specified in the plans, concrete shall be placed in a continuous operation from the bottom of the shaft to 2'-6" above the shaft construction joint or as directed by the Engineer, but in no case less than 1'-0". Care shall be exercised to control and minimize the depth of scum, laitance, loose grave, and sediment above the shaft construction joint prior to concrete set. After the shaft concrete has cured for a minimum of 72 hours and after conducting nondestructive testing, the Contractor shall remove all remaining scum, laitance, loose gravel, and sediment down to sound concrete, or to the depth

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of the shaft construction joint, whichever is lower. After approval of the shaft, the column reinforcing shall be set and the remaining portion of the shaft concrete shall be poured in the dry.

Concrete waste shall not enter the waterway as required by any applicable Section 404 Permits. Exposed portions of each drilled shaft shall be cured and any construction joint area shall be treated as prescribed in Section 802 and roughened to an amplitude of ¼ inch.

Placement of drilled shaft concrete underwater shall be done only with permission of the Engineer in strict conformance with the procedures outlined below for an underwater pour.

1. Concrete Placed in the Dry. All drilled shaft concrete placed in the dry shall be placed through a tremie or by pumping to prevent segregation of materials. The tremie shall have sufficient length to discharge concrete at the shaft base and shall consist of a rigid tube with a diameter of no more than 14 inches nor less than 10 inches and be fitted with a hopper at the top. The tremie shall not contain aluminum parts that may come in contact with the concrete. The inside and outside surfaces of the tremie shall be clean and smooth to permit flow of concrete and unimpeded withdrawal. It shall be constructed and supported so that it can be moved horizontally to cover the work area and moved vertically to control the concrete flow as the level of the concrete in the shaft is raised. The bottom of the tremie or pump pipe shall be at the bottom of the shaft at the beginning of concrete placement, but will not be required to remain at the bottom of the shaft during the entire pour. The bottom of the tremie must remain below the top of the concrete at all times.

   The concrete pump line shall have a minimum diameter of 4 inches with the portion of the line inside the excavation meeting the requirements above, but only that portion of the pump line in contact with the concrete will be required to be rigid. All pump equipment shall be clean and in good operating condition.

2. Concrete Placed Underwater. If it becomes apparent that pumping and other dewatering methods are not adequate to dry the holes, the Engineer may authorize underwater placement of concrete. In this case, the water in the hole shall be permitted to seek its natural hydrostatic head to prevent any possibility of pressure washing of the concrete being placed.

   The tremie and pump line requirements shall be the same as specified above for concrete placed in the dry except tremie and pump lines shall be watertight and constructed so that the discharge end can be sealed closed at the start of work to prevent water from entering the tremie or pump line before the tremie or pump line is filled with concrete. If a plug is used to separate the concrete from the fluid in the hole, the plug shall be removed from the excavation after placement has begun. Concrete placement shall be done in one continuous operation. The discharge orifice shall be at the bottom of the shaft at the beginning of the concrete placement and shall remain at least 5 feet below the top surface of the fluid concrete. The Contractor shall provide equipment and personnel to sound the top of the concrete in the presence of the Engineer in order to verify the location of the concrete surface and the discharge orifice at all times. After concrete placement has started the concrete level in the tremie shall be maintained above the water level in the bore hole to prevent water intrusion into the

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shaft concrete. When lifting the pump line during concreting, the Contractor shall temporarily reduce line pressure until the orifice has been repositioned at a higher elevation in the excavation. If at any time during the concrete pour the orifice is removed from the fluid concrete and discharges concrete above the rising concrete surface, the entire drilled shaft will be considered defective. In such case, the Contractor shall remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or overreaming as directed by the Engineer, and repour the shaft.

(h) Drilled Shaft Log. A record of each shaft construction shall be furnished by the Contractor to the Engineer prior to acceptance of the shaft. This Drilled Shaft Log shall include: information about the drilling procedures and equipment; a log of the excavated material; the as constructed elevations and lengths of all vertical elements of the shaft including reinforcing and casings; depth of final excavation, founding material and bottom condition; concrete volume and a concreting curve showing depth versus volume over the length of the shaft, volume used in overflow and purging; and the date and time of pertinent operations used in constructing the drilled shaft from beginning of excavation to completion of concrete placement. If a shaft construction joint below the top of the shaft is specified in the plans, the Drilled Shaft Log shall include the depth of concrete poured above the shaft construction joint, the depth of concrete removed prior to concrete set, and the method(s) used to control and minimize the depth of scum, laitance, loose gravel, and sediment above the shaft construction joint. During concrete operations, except for those above a shaft construction joint, the Contractor shall dedicate an inspector to the function of monitoring concreting operations and recording these portions of the Drilled Shaft Log. Failure to meet this requirement will be grounds for additional integrity investigation of the shaft at the Contractor's expense.

Method of Measurement. Acceptable drilled shafts, complete in place and of the specified diameter, will be measured by the linear foot as constructed to the dimensions shown on the plans or approved by the Engineer from bottom to top of shaft. No additional payment will be made for any excavation or concrete provided beyond the lines required by the plans.

Permanent casing for the specified diameter will be measured by the linear foot of the actual accepted length left in place. Measurement will be along the casing from top of casing or top of shaft, whichever is lower, to the bottom of the casing at each shaft location where permanent casing is authorized and used.

Temporary steel casing will not be measured for separate payment but shall be included in the unit price for "Drilled Shaft (__" Dia.)".

Basis of Payment. Drilled shafts, measured as provided above, will be paid for at the contract unit price bid per linear foot for "Drilled Shaft (__" Dia.)" which shall be full compensation for making and inspecting shaft excavations; for drilling test borings and furnishing logs; for furnishing, placing, and removing temporary casing; for furnishing and placing all concrete and reinforcing steel; for the removal of scum, laitance, loose grave, and sediment down to sound concrete when preparing a shaft construction joint; for performing mix designs; for preparing trial batches; for keeping the Drilled Shaft Log; for providing and placing necessary materials for nondestructive testing as required by those special provisions; for quality

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control and acceptance sampling and testing; for all backfilling; and for furnishing all tools, labor, equipment and incidentals necessary to complete the work.

When drilled shafts are carried below elevations shown on the plans at the direction of the Engineer, the additional length of drilled shaft will be measured as provided above and will be paid for in accordance with the following price schedule:

Depth Below Planned Elevation	**Price**
Not more than 5 feet	Contract Price
Excess of 5 feet and not more than 15 feet	Contract Price + 15%
More than 15 feet	Contract Price + 25%

Permanent casing will be paid for at the contract unit price bid per linear foot for "Permanent Steel Casing (__" Dia.)" which shall be full compensation for furnishing and placing the casing above the costs attributed to the work paid for under associated pay items.

Payment will be made under:

Pay Item	**Pay Unit**
Drilled Shaft (__" Dia.)	Linear Foot
Permanent Steel Casing (__" Dia.)	Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

NONDESTRUCTIVE TESTING OF DRILLED SHAFTS

Description. This work shall consist of the Nondestructive Testing (NDT) of drilled shaft foundations, as described herein. All work shall be in accordance with this Special Provision, the details shown in the plans, Standard Specifications, and as directed by the Engineer.

Work to be Performed. (a) General Requirements. The NDT methods known as Crosshole Sonic Logging (CSL) and Thermal Integrity Profiling (TIP) shall be used on each drilled shaft where specified in the plans. The Contractor shall employ one experienced independent testing organization approved by the Engineer to perform all NDT testing. Information shall be supplied showing the independent testing organization has the experience in the kind of work described in this Special Provision and also showing they have the equipment capable of performing the work.

(b) CSL (1) Testing. Testing shall be in accordance with ASTM D6760 and this Special Provision and shall not be conducted until at least 72 hours after placement of concrete is concluded in the shaft. Testing of the first shaft placed shall be completed within 14 calendar days after placement of concrete in the first shaft.

The Engineer shall approve the scheduling of subsequent testing. Testing on the remaining shafts shall be completed within 14 calendar days of the last shaft placed, but no later than 45 calendar days after placement of concrete in a particular shaft.

(2) Preparation for Testing. To accommodate the CSL test requirements, the Contractor shall install a number of pipes in each shaft. The number of pipes installed will depend on the diameter of the shaft as specified below:

Shaft Diameter	Minimum Number of Pipes	Pipe Spacing
72"	6	60 Degrees

The pipes shall be ASTM A53 Standard Weight, or an approved equivalent, steel pipe with a minimum inside diameter (ID) of 1.5 or 2 inches and shall be in compliance with “Buy America” requirements and Subsection 106.01. The pipes shall have a round, regular internal diameter free of defects or obstructions including defects at pipe joints; in order to permit the free, unobstructed passage of 1.375-inch diameter source and receiver probes. The pipes shall be watertight and free from corrosion with clean internal and external faces to ensure passage of the probes inside and a good bond with the concrete outside.

NONDESTRUCTIVE TESTING OF DRILLED SHAFTS

Each pipe shall be fitted with a watertight shoe on the bottom and a removable cap or plug on the top. The pipes shall be securely attached to the interior of the reinforcing steel cage. The pipes shall be installed in each shaft in a regular, symmetric pattern such that each pipe is equally spaced from the others around the perimeter of the cage. Prior to construction, the Contractor shall submit their selection of pipes and proposed method of pipe installation to the approved testing organization. The pipes shall be secured to the reinforcing cage at three-foot vertical intervals, such that the pipes remain in position during placement of the cage and placement of the concrete.

The pipes shall be as near to parallel as possible. **They shall extend from within 0.25 feet above the shaft's excavated bottom to at least 3 feet above the top of shaft. If the length of the excavated shaft varies from the plans, the pipes shall be adjusted to meet the above requirements.** No pipe may be allowed to rest on the bottom of a drilled excavation. Any joints required to achieve full length pipes shall be made watertight. Care shall be taken during placement of the reinforcing steel cage so as not to damage the pipes.

After placement of the cage, and before placement of concrete, the pipes shall be filled with potable water and the pipe tops shall be capped or sealed to keep debris or other foreign matter out of the pipes. In a case where conditions make rapid concrete placement imperative, the Engineer may permit the filling of the pipes to be delayed until immediately after the concrete is placed while exercising care to avoid spilling of water onto freshly cast concrete. Care shall be exercised in the removal of caps or plugs so as not to apply excess torque, hammering, or other stresses that could break the bond between the pipes and the concrete.

Upon completion of all CSL testing on a shaft, and after the acceptance of that shaft by the Engineer, the pipes shall be filled by the Contractor with a QPL approved grout such that no air pockets or impurities remain in the pipes. All water shall be removed from the access pipes. The portion of pipe extending above the top of the shaft shall be removed.

(3) CSL Test Equipment. The CSL testing equipment shall consist of all necessary supplies, support equipment, and power to perform the testing and to record, analyze, and report the results in accordance with this Special Provision.

(4) CSL Testing Procedures. Before placement of concrete, the Contractor shall investigate at least one pipe per shaft to ensure there are no bends, crimps, obstructions or other impediments to the free passage of the testing probes. A record of all pipe lengths, including a measurement of the projection of the pipes above the top of the shaft shall be made. Prior to the CSL tests, the Contractor shall provide this information, shaft bottom elevations, top elevations, and construction dates to the approved testing organization and Engineer.

The tests shall be conducted between various pairs of pipes. The approved testing organization shall test between all pairs across the central area of the shaft and between each pipe pair around the perimeter of all tested shafts. Additional pairs may be used to evaluate anomalies/defects as described below, or as required by the Engineer.

The CSL test shall be carried out with the source and receiver probes in the same horizontal plane. Any slack shall be removed from the cables prior to pulling to provide for accurate depth measurements in the CSL records. CSL measurements shall be made at increments of 3 inches or

NONDESTRUCTIVE TESTING OF DRILLED SHAFTS

less from the bottom to the top of each shaft. The probes shall be pulled simultaneously over the depth measuring wheel, starting from the bottoms of the pipes.

Any anomalies/defects indicated by longer pulse arrival times and significantly lower amplitude/energy signals shall be reported to the Engineer. Further tests may be required to evaluate the extent of such anomalies/defects. Additional NDT methods which could be used to evaluate possible defects include: Angled Crosshole Sonic Logging, Crosshole Tomography, Single Hole Sonic Logging, Gamma-Gamma Nuclear Density Logging, and Sonic Echo and Impulse Response tests. Any additional nondestructive testing shall be provided at no cost to the Department and with no extension of the contract time.

(5) CSL Testing Results. The CSL test results shall be compiled into an overall shaft integrity testing report for each shaft. The report shall summarize and analyze (a) initial pulse arrival time versus depth and (b) pulse energy/amplitude versus depth. In addition, the report shall include a (c) plot of pulse velocity versus depth and a (d) waterfall diagram of nested arrival times for each pair of tubes that are tested. A CSL log will be presented for each pair of pipes tested, with any defect zones indicated on the logs and discussed in the report. All filtering or smoothing of the processed results shall be disclosed in the report. The logs shall cover the full length of shaft corresponding to the measurements provided by the Contractor for the constructed length minus 0.75 feet to allow for CSL tube to shaft bottom offset and CSL equipment limitations. More than 0.75 feet of missing data at any tube pair will be grounds for additional integrity investigation at the Contractor's expense.

(c) TIP (1) Testing. Testing, if specified in the plans, shall be in accordance with ASTM D7949 (Method B) and the provisions herein. Temperature measurements at each drilled shaft shall begin as soon as concrete placement has ceased, or sooner if directed so by the testing agency, and shall be recorded at 15 minute intervals for a minimum of 36 hours or until peak temperature is captured in the data, whichever is longer. Additional monitoring time may be required if the drilled shaft concrete contains admixtures such as set-retarders and water-reducing agents. Due to the limited time window for proper TIP testing, the Contractor shall coordinate with the testing agency all necessary project scheduling in an effort to minimize project delays and ensure proper monitoring of the concrete heat of hydration.

(2) Preparation for Testing. The testing agency shall work closely with the Contractor to ensure all thermal wiring is properly installed and functional prior to cage installation and again prior to concreting. The Contractor responsible for installing the thermal wiring shall be required to obtain training from the Manufacturer on proper installation practices prior to actual installation. The number of thermal wires necessary for proper TIP testing shall be at the recommendation of the testing agency and meet or exceed standard industry practice based on the concrete volumes used, but in no case shall be less than one thermal wire per foot of shaft diameter, rounding to the next whole number as necessary (e.g., five wires are required for a 4'-6" diameter shaft). Thermal wiring shall be installed uniformly around the perimeter of the reinforcing cage and shall be adequately secured to the reinforcing steel cage. Securing thermal wiring to CSL tubes will not be allowed. Thermal wiring shall extend to a depth capable of providing temperature measurements to within 0.5 feet of the shaft's excavated bottom. If the bottom of drilled shaft is excavated below plan elevation requiring the cage to be extended, proper measures shall be followed to adjust thermal wiring placement in a manner approved by the testing agency to ensure adequate TIP testing coverage. The Contractor shall provide an

accurate record of thermal wiring serial numbers (or other identification codes) and their corresponding locations in each shaft for proper monitoring.

All thermal access ports (TAPs) shall be adequately protected from damage during rebar placement and concreting operations. Adequate thermal wiring shall be extended from the top of shaft to allow connecting of TAPs and all thermal monitoring equipment.

The Contractor shall work closely with the testing agency to provide all relevant information required for proper TIP testing, such as shaft drilling and inspection records, detailed concrete placement logs, and concrete mix design.

(3) TIP Test Equipment. The TIP testing equipment shall consist of all necessary supplies, support equipment, and power to perform the testing and to record, analyze, and report the results in accordance with this Special Provision.

(4) TIP Testing Results. The TIP test results shall be compiled into an overall shaft integrity testing report for each shaft. The report shall address, but not be limited to: overall shaft geometry, concrete cover, concrete quality, and location of the reinforcing cage. Any anomalies shall be addressed in the report along with the testing agency's expert opinion of what the likely cause of the anomaly is. The temperature data shall cover the full length of shaft corresponding to the measurements provided by the Contractor for the constructed length minus 0.5 feet to allow for thermal wire to shaft bottom offset. More than 0.5 feet of missing data will be grounds for additional integrity investigation at the Contractor's expense.

(d) Evaluation of NDT Test Results. The CSL and TIP test results shall be compiled into an overall integrity testing report for each shaft and approved/sealed by an Arkansas Licensed Professional Engineer. The approved testing organization shall supply one digital copy, in an approved format, of the NDT test report to the Engineer and a copy of each report shall be provided to the Contractor.

The integrity report for the first shaft shall be provided to the Engineer within 72 hours of completion of all NDT testing on that shaft. The Contractor will not be allowed to begin any construction operations on the remaining shafts or make additional permanent construction on the first shaft until the Engineer has approved the first shaft. The Engineer will evaluate the NDT test results and will determine whether or not the drilled shaft construction is acceptable. If the Engineer approves the first drilled shaft based upon the results of the NDT tests, then the shaft and the shaft site will be turned back to the Contractor and further construction may proceed.

The integrity reports of the subsequent shafts shall be provided to the Engineer within 72 hours of completion of all NDT testing on each shaft. The Contractor will not be allowed to make additional permanent construction on each shaft until the Engineer has approved that shaft.

Provided the reports received meet the requirements of this Specification, the Engineer will provide a response within 10 business days of each report received. Incomplete submission of required data necessary for review, including detailed drilled shaft logs, will delay this review and no contract time extensions will be allowed due to delays caused by incomplete submittals.

NONDESTRUCTIVE TESTING OF DRILLED SHAFTS

The acceptance of each drilled shaft shall be the decision of the Engineer, based on the results of the shaft integrity testing reports and other information of the shaft placement. If it is determined by the Engineer that any confirmed defect indicated by a NDT test may affect the structural integrity of the shaft, the Engineer may require the Contractor to verify shaft conditions by core drilling in accordance with Subsection (e), "Evaluation by Core Drilling."

(e) Evaluation by Core Drilling. A drilled shaft that is found to be unacceptable by the NDT tests may be cored by the Contractor using double tube core barrels. Core samples shall be obtained, handled, and tested in accordance with AASHTO T 24-15. At the Contractor's option a PQ size core barrel may be used. Core samples will be delivered to the Department's Materials Division where they will be visually inspected and selected samples will be evaluated for compressive strength. Selected samples with compressive strengths less than 0.85 f'c will be considered unacceptable. A core sample shall be taken from each defect location, at a length specified by the Engineer. The methods and equipment used to core the drilled shaft and grout the cored hole shall be approved by the Engineer prior to commencing coring operations. An accurate log of the core shall be kept and the core shall be crated/boxed and properly marked showing the shaft depth at each interval of core recovery. The crates/boxes which store the cores shall be properly labeled with the job number, bridge number, bent number, and the shaft number. The core, along with two copies of the coring log, shall be provided to the Engineer.

If the quality of the shaft, as represented by the core samples, is determined to be acceptable by the Engineer, then the shaft and the shaft site will be turned back to the Contractor and further construction may proceed. If the quality of the shaft is determined to be unacceptable by the Engineer, then the Contractor shall proceed in accordance with Subsection (f), "Defective Shaft," below. If a defect is confirmed, the Contractor shall pay for all coring and grouting in the shaft related to a suspected defect. If no defect is encountered, compensation for all coring and grouting in the shaft will be paid for at the contract unit price bid per linear foot for "Coring Drilled Shaft." Upon acceptance of the shaft, core holes shall be cleaned and filled with a QPL approved grout such that no impurities or air pockets remain.

(f) Defective Shaft. If the Engineer determines that a shaft is unacceptable, the Contractor shall submit a plan for remedial action to the Engineer for approval. Any modifications to the foundation shaft and load transfer mechanisms caused by the remedial action will require calculations and working drawings stamped and signed by an Arkansas Licensed Professional Engineer for all affected foundation elements. This data shall be submitted to the Engineer for information and record keeping purposes. All labor and materials required to perform remedial shaft action shall be provided at no cost to the Department and with no extension of the contract time.

Method of Measurement. (a) CSL Testing. Acceptable CSL tests shall be measured per each shaft tested of a specified diameter.

(b) TIP Testing. Acceptable TIP tests shall be measured per each shaft tested of a specified diameter. Non-functioning thermal sensors will be grounds for rejection at the discretion of the Engineer.

(c) Coring Drilled Shafts. If no defect is encountered, the coring of shafts shall be measured by the linear foot.

NONDESTRUCTIVE TESTING OF DRILLED SHAFTS

Basis of Payment. CSL and TIP testing shall be paid for at the contract unit price bid per each shaft tested of a specified diameter. The price bid for each shaft tested shall be full compensation for furnishing all equipment and incidentals necessary to perform the required test, performing the tests, analyzing the results, and furnishing the Engineer with the shaft integrity reports, as required.

Furnishing and installing all wiring, connectors, pipes, splices, maintaining water level in the pipes, dewatering the pipes, removing excess pipe above top of shaft, and filling the tubes with grout will be considered incidental to the unit price bid for "Drilled Shaft (" Dia.)".

Coring for shafts where no defect is encountered will be paid for at the unit price bid per linear foot of "Coring Drilled Shaft" which price shall be compensation for furnishing all labor, materials, grout, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Crosshole Sonic Logging (__" Dia.)	Each
Thermal Integrity Profiling (__" Dia.)	Each
Coring Drilled Shaft	Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

EXPLORATORY HOLES

Description. This specification covers exploratory hole requirements during the construction of bridge foundations. The Contractor shall drill a sufficient number of exploratory holes as determined by the Engineer.

The exploratory holes shall be 1-1/2" or more in diameter and shall be drilled until rock is encountered or until the Engineer directs the boring to cease.

Method of Measurement. Exploratory Holes will be measured by the linear foot drilled at the direction of the Engineer.

Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for Exploratory Holes, which price shall be full compensation for drilling holes as required; and for furnishing all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Exploratory Holes	Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES

Description. This item consists of the optional use of compressible-washer-type direct tension indicators to indicate bolt tension in high strength bolted assemblies in accordance with these specifications and in conformity with the plans. All references to Division, Section, and Subsection refer to the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition).

Subsection 807.06(a) is amended to include the following paragraph for Direct Tension Indicators (DTI):

Direct tension indicators shall be used in conjunction with bolts, nuts and washers as specified above. Direct tension indicators shall conform to the requirements of ASTM F959. Direct tension indicators for plain Type 1 high strength bolts shall be plain or galvanized. Galvanizing for direct tension indicators shall be by mechanical deposition in accordance with ASTM B695, Class 50. Direct tension indicators for Type 3 high strength bolts shall be Type 3.

Subsection 807.06(b) is modified as follows for Direct Tension Indicators (DTI): The first paragraph is deleted and the following substituted therefor:

(b) Required Tests. (1) Rotational Capacity. High strength fasteners, plain and galvanized, shall be subjected to a rotational capacity test according to ASTM F3125, Grade A325, Section 8.1, and shall meet the following requirements:

Subsection 807.06(b) is modified as follows for Direct Tension Indicators (DTI): The third paragraph is deleted and the following substituted therefor:

(2) Verification Testing for Direct Tension Indicators. Verification testing shall be performed in a calibration bolt tension device. A special flat insert shall be used in place of the normal bolt head holding insert. Three verification tests shall be required for each combination of fastener assembly rotational-capacity lot, direct tension indicator lot, and direct tension indicator position relative to the turned element to be used on the project. The fastener assembly shall be installed in the tension measuring device with the direct tension indicator located in the same position as in the work. The element intended to be stationary shall be restrained from rotation.

The verification test shall be conducted in two stages. The bolt, nut and direct tension indicator assembly shall be installed in a manner so that at least three and preferably not more than five threads are located between the bearing face of the nut and the bolt head. The bolt shall first be tensioned to the load equal to that listed in Table 807-3 under Verification Tension for the specified bolt. If an impact wrench is used, the tension developed using the impact wrench shall be no more than two-thirds of the required tension. Final tensioning shall be attained using

DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES

a manual wrench. The number of refusals of the 0.005" (0.125 mm) feeler gage in the spaces between the protrusions shall be recorded. The number of refusals for uncoated direct tension indicators under a stationary or turned element, or coated direct tension indicators under a stationary element, shall not exceed the number listed under Maximum Verification Refusals in Table 807-3 for the specified bolt. The maximum number of verification refusals for coated direct tension indicators, when used under a turned element, shall be no more than the number of spaces on the direct tension indicator less one. The direct tension indicator lot shall be rejected if the number of refusals exceeds the values in Table 807-3, or for coated if the gage is refused at all spaces.

After the number of refusals is recorded at Verification Tension, the bolt shall be further tensioned until the 0.005" (0.125 mm) feeler gage is refused at all the spaces and a visible gap exists in at least one space. The load at this condition shall be recorded and the bolt removed from the tension-measuring device. The nut shall be able to be run down freely by hand the complete thread length excluding thread run-out. If the nut cannot be run down for this thread length, the direct tension indicator lot shall be rejected unless the load recorded is less than 95 percent of the average load measured in the rotational capacity test of the fastener lot as specified in Subsection 807.06(b)(1) Rotational Capacity.

If the bolt is too short to be tested in the calibration device, the direct tension indicator lot shall be verified on a long bolt in a calibrator to determine the number of refusals at the Verification Tension listed in Table 807-3, the number of refusals shall not exceed the values listed under Maximum Verification Refusals in Table 807-3. Another direct tension indicator from the same lot shall then be verified with the short bolt in a convenient hole in the work. The bolt shall be tensioned until the 0.005" (0.125 mm) feeler gage is refused in all spaces and a visible gap exists in at least one space. The bolt shall be removed from the work and the nut shall be able to be run down freely by hand the complete thread length of the bolt excluding thread run-out. The direct tension indicator lot shall be rejected if the nut cannot be run down this thread length.

(3) Test Reports. The Engineer shall be furnished with a Manufacturer's certified test report for each production lot for all high strength bolts, nuts, washers, and direct tension indicators used on the project. This certification shall provide a lot number, shop order number, or other identification such that the heat number from which the items were made can be traced. This identifying number shall also appear on the sealed shipping containers. The certification shall indicate when and where all testing was done, including the rotational capacity tests, and include the zinc thickness when galvanized bolts, nuts, washers and direct tension indicators are used. The certification for direct tension indicators shall also include compression test loads, gap clearance, nominal size and type.

Subsection 807.71(b) is modified as follows for Direct Tension Indicators (DTI): The first paragraph is deleted and the following substituted therefor:

(b) Bolts, Nuts, Washers, and Direct Tension Indicators. Fastener components shall conform to the requirements of Subsection 807.06.

Subsection 807.71(d) is deleted and the following substituted therefor:

DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES

(d) Installation. (1) Bolt Tension. Compressible-washer-type direct tension indicators shall be used to indicate bolt tension. They shall be subject to the verification testing specified in Subsection 807.06 (b)(2) and installed in accordance with the method below. Bolt lengths shall be sufficient to accommodate direct tension indicators and any additional washers required. Direct tension indicators will be required at all high strength bolted connections. Direct tension indicator type and manufacturer shall not be mixed within a project.

Unless approved by the Engineer direct tension indicator shall be installed under the head of the bolt and the nut turned to tension the bolt. The Manufacturer's recommendations shall be followed for the proper orientation of the direct tension indicator and any additionally required washers. Installation of a direct tension indicator under the turned element may be permitted if a washer is used to separate the turned element from the direct tension indicator. The reuse of direct tension indicators will not be allowed. If it becomes necessary to loosen a previously tensioned bolt, the direct tension indicator shall be replaced.

Installation of fastener assemblies using direct tension indicators shall be in two stages. The stationary element shall be held against rotation during both stages. The connection shall first be brought to a snug tight condition with bolts installed in all holes. Snug tight, for bolt assemblies using direct tension indicators, exists when the plies of the joint are in firm contact and the number of spaces in which a 0.005" (0.125 mm) feeler gage is refused does not exceed that listed under Maximum Verification Refusals in Table 807-3. If the number of refusals exceeds the value listed under Maximum Verification Refusals in the Table 807-3 the direct tension indicator shall be replaced and the fastener assembly brought to a snug tight condition as specified above.

After all bolts in the connection have been properly brought to a snug tight condition, for uncoated direct tension indicators under a turned or stationary element and for coated direct tension indicators under a stationary element, the bolt assembly shall be further tensioned until the number of refusals of the 0.005" (0.125 mm) feeler gage is equal to or greater than the number listed under Minimum Installation Refusals in Table 807-3. If the bolt assembly is tensioned so that no visible gap remains in any space, the bolt assembly shall be removed and replaced by a new bolt and direct tension indicator that is properly tensioned. When coated direct tension indicators are used under a turned element, the 0.005" (0.125 mm) feeler gage shall be refused in all spaces, but a visible gap must remain in any space.

(2) Power Wrench Tightening. When power wrenches are used to provide the bolt tension specified Table 807-3, their setting shall be such that the requirements of Subsection 807.71(d)(1) are met. Wrenches shall be of adequate capacity to perform the required tightening of each bolt assembly in less than 10 seconds.

DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES

TABLE 807-3
DIRECT TENSION INDICATOR REQUIREMENTS

U.S. Standard		METRIC (SI)				
Bolt Size (Inches)	**Verification Tension (kips)**	**Bolt Size**	**Verification Tension (kN)**	**Maximum Verification Refusals**	**DTI Spaces**	**Minimum Installation Refusals**
1/2	13			1	4	2
5/8	20	M16	96	1	4	2
3/4	29	M20	149	2	5	3
7/8	41	M22	185	2	5	3
1	54	M24	215	2	6	3
1 1/8	59	M27	280	2	6	3
1 1/4	75	M30	342	3	7	4
1 3/8	89	M36	499	3	7	4
1 1/2	108			3	8	4

Subsection 807.71(e) is deleted and the following substituted therefor:

(e) Inspection. (1) The Engineer will observe the installation and tightening of bolts to determine that all bolts are tightened as specified. Where direct tension indicators are used the Engineer will examine at least 10 percent, but no less than 2 bolt assemblies in each connection for gap requirements and acceptability in accordance with the requirements of paragraph (d)(1). If any bolt assembly fails to meet these requirements all bolt assemblies in the connection shall be examined by the Engineer and the Fabricator or Erector shall retighten or replace bolt assemblies according to paragraph (d)(1).

(2) At the direction of the Engineer the Contractor may be required to inspect tightened bolt assemblies in a connection using an inspection wrench (only calibrated torque wrench will be acceptable). The inspection shall be conducted before loss of lubricant or corrosion influences the tightening torque.

The inspection wrench shall be calibrated by tightening three typical sample bolt assemblies of the same grade, size and condition as those under inspection in a calibration bolt tension device. A special flat insert shall be used in place of the normal bolt head holding insert. Each sample bolt assembly shall be individually placed in the calibration device and tightened to the verification tension specified in Table 807-3 for the grade and size being inspected. The fastener assembly shall be installed in the tension measuring device with the direct tension indicator located in the same position as in the work. The element intended to be stationary shall be restrained from rotation and here shall be a washer under the turned element of each sample bolt assembly. The inspecting wrench shall be applied to the tightened sample bolt assembly and the

DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES

torque necessary to turn the nut or head 5° (approximately 1" [25 mm] at 12" [300 mm] radius) in the direction of tensioning shall be determined. The average of the torque measured in the testing of the three sample bolt assemblies shall be taken as the job inspection torque.

Where directed by the Engineer bolt assemblies represented by the sample bolt assembly and that have been tightened in the structure shall be inspected by applying the inspection wrench and its job inspection torque. If no nut or bolt head is turned by this application of the job inspecting torque, the connection will be accepted as properly tightened. If any nut or bolt head is turned by the application of the job inspecting torque, this torque shall be applied to all bolts in the connection, and all bolt assemblies whose nut or head is turned by the job inspecting torque shall be tightened and reinspected, or alternatively, the Fabricator or Erector, at his option, may retighten all of the bolt assemblies in the connection and resubmit the connection for the specified inspection.

Payment. All costs incurred in complying with this Special Provision including all costs for furnishing, installing, and testing of Direct Tension Indicators will not be measured or paid for separately, but shall be considered subsidiary to the items of “Structural Steel in Plate Girder Spans ( )” and “Structural Steel in Beam Spans ( )”.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

SPECIAL SAFETY REQUIREMENTS FOR BRIDGES

Description. This specification covers special safety requirements during the construction of Bridge Nos. 07499 and 07500 and the removal of Bridge No. 03787. These requirements are intended for the safety of both the traveling public and the workers. Any modifications must meet the approval of the Engineer.

Construction of New Bridge. (a) Erection of structural steel, placement and removal of safety platforms, painting and other activities deemed necessary by the Engineer on the spans over Interstate 40 and Highway 365 **shall be limited to off peak traffic hours between 9:00 p.m. and 5:00 a.m. Monday through Saturday, or anytime on Sunday, but will not be permitted on legal holidays or weekends adjacent to these holidays.** During this time window, all traffic may be stopped for short intervals of time, not to exceed 15 minutes, in order that the above activities can progress without endangering the traveling public. Between closure periods the roadway must be opened for a sufficient time to allow re-establishment of the normal flow of traffic. Time windows are subject to adjustment by the Engineer when necessary to accommodate special events or situations.

(b) The Contractor shall notify the Resident Engineer no less than five days before erection of structural steel or any other activities that will temporarily or permanently reduce the vertical clearance over the above listed roadway(s). Notification is required for each subsequent activity that will reduce the previous existing clearance. A minimum vertical clearance of 14'-0" must be maintained during all activities.

(c) The Contractor shall notify all local law enforcement and emergency agencies of closures or other activities that will affect normal flow of traffic on the above listed roadway(s) no less than three days before any such activities occur.

(d) Construction of bents and embankments shall be accomplished in such a manner that traffic is maintained on the highway as described above. Precast barriers shall be placed as shown on the roadway plans before work is performed. Sheet piling or other means shall be used to prevent embankment or excavated material from spilling onto the existing highway or to protect the shoulders from bent excavation. Excavation for footings and pouring of concrete shall be accomplished without construction equipment obstructing traffic.

Details of the shoring – complete with dimensions, design calculations, and kind and condition of materials – must be submitted to the Engineer for informational and record purposes prior to construction. These details must be prepared and/or approved by a Professional Engineer licensed in Arkansas.

SPECIAL SAFETY REQUIREMENTS FOR BRIDGES

The Contractor shall construct the shoring in accordance with the details submitted to the Engineer and the results obtained by the use of the shoring design are the Contractor's responsibility.

(e) During the erection of the structural steel, permanent bents or sufficient falsework shall be provided for support of the steel beams. Highway traffic shall not be allowed to travel under a span while a piece of structural steel on that span is being moved into position or before a steel beam is securely supported by falsework or by a permanent bent. Equipment or materials of any kind shall not be hoisted over highway traffic.

Any falsework or construction equipment required for the erection of the structural steel, or for other activities, shall be protected by precast barriers as shown on Standard Drawing TC-4. The precast barriers may be located to close a shoulder as approved by the Engineer. Appropriate signs must be in place when a shoulder is closed.

(f) Immediately after erection of structural steel, a safety platform shall be constructed directly under the steel beams on the spans over the highway for the entire area of construction to protect traffic from falling objects. The Contractor must devise a method of support for the safety platform used under the deck outside the exterior beams. The safety platform outside the exterior beams shall be below and independent of the overhang brackets. The safety platform between the exterior beams shall be plywood sheets adequately supported on top of the bottom beam flange, or other method as submitted by the Contractor.

Details for the platform construction - complete with dimensions, design calculations, and kind and condition of materials - must be submitted to the Engineer for informational and record purposes prior to construction. These details must be prepared and/or approved by a Professional Engineer. The Contractor shall construct the platform in accordance with the details submitted to the Engineer and the results obtained by the use of the platform design are the Contractor's responsibility. Traffic shall not be allowed to travel under a portion of platform being installed or removed.

(g) Permanent steel deck forms shall be used between beams in spans over the highway. Further requirements and details of permanent steel deck forms may be found on Standard Drawing No. 55005 and Subsection 802.14(b) of the Standard Specifications. Permanent steel deck forms will not be considered as part of the required safety platform.

(h) The epoxy tie coat may be applied before erection if the urethane coat can still be applied after erection but within the time interval recommended by the Manufacturer. The application of the urethane coat shall be deferred until adjoining concrete work has been placed and finished. If concreting operations damage the epoxy tie coat, the surface shall be recleaned and repainted. Spray painting will be permitted in applying the coat(s) of paint after erection to the spans over the highway during the work periods described above. The Contractor shall use tarps or similar curtains while spraying spans over the existing highway and when adjacent to traffic to prevent damage to highway traffic from drift. The Contractor shall assume all responsibility for any damage.

SPECIAL SAFETY REQUIREMENTS FOR BRIDGES

Removal of Existing Bridge. (a) Removal of structural steel, placement and removal of safety platforms, and other activities deemed necessary by the Engineer on the spans over Interstate 40 **shall be limited to off peak traffic hours between 9:00 p.m. and 5:00 a.m. Monday through Saturday, or anytime on Sunday, but will not be permitted on legal holidays or weekends adjacent to these holidays.** During this time window, all highway traffic may be stopped for short intervals of time, not to exceed 15 minutes, in order that the above activities can progress without endangering the traveling public. Between closure periods the roadway must be opened for a sufficient time to allow re-establishment of the normal flow of traffic. Time windows are subject to adjustment by the Engineer when necessary to accommodate special events or situations.

(b) The Contractor shall notify the Resident Engineer no less than five days before removal of structural steel or any other activities that will temporarily or permanently reduce the vertical clearance over the above listed roadway(s). Notification is required for each subsequent activity that will reduce the previous existing clearance. A minimum vertical clearance of 14'-0" must be maintained during all activities.

(c) The Contractor shall notify all local law enforcement and emergency agencies of closures or other activities that will affect normal flow of traffic on the above listed roadway(s) no less than three days before any such activities occur.

(d) Removal of bents shall be accomplished in such a manner that traffic is maintained on the highway as described above. Precast barriers shall be placed as shown on the roadway plans before work is performed. Sheet piling or other means shall be used to prevent embankment or excavated material from spilling onto the existing highway or to protect the shoulders from bent excavation. Excavation for footings and pouring of concrete shall be accomplished without construction equipment obstructing traffic.

Details of the shoring – complete with dimensions, design calculations, and kind and condition of materials – must be submitted to the Engineer for informational and record purposes prior to construction. These details must be prepared and/or approved by a Professional Engineer licensed in Arkansas.

The Contractor shall construct the shoring in accordance with the details submitted to the Engineer and the results obtained by the use of the shoring design is the Contractor's responsibility.

(e) During the removal of the structural steel, permanent bents or sufficient falsework shall be provided for support of the steel beams. Vehicles shall not be allowed to travel under a span while a piece of structural steel on that span is being removed or before a steel beam is securely supported by falsework or by a permanent bent. Equipment or materials of any kind shall not be hoisted over highway traffic.

Any falsework or construction equipment required for the removal of the structural steel, or for other activities, shall be protected by precast barriers as shown on Standard Drawing TC-4. The precast barriers may be located to close a shoulder as approved by the Engineer. Appropriate signs must be in place when a shoulder is closed.

SPECIAL SAFETY REQUIREMENTS FOR BRIDGES

(f) Before removing any part of the superstructure over or immediately adjacent to a highway or shoulders, a safety platform shall be constructed directly under the steel beams on the spans and shoulders over the highway for the entire area of demolition to protect traffic from falling objects. This platform shall consist of timbers, heavier than plyboard, capable of supporting pieces of concrete falling from the deck during its removal. The platform may be positioned between the existing beams and supported on top of the bottom beam flanges. The Contractor must devise a method of support for the safety platform used under the deck outside the exterior beams. After removing the concrete from the superstructure, the safety platform shall be removed.

Details for the platform construction - complete with dimensions, design calculations, and kind and condition of materials - must be submitted to the Engineer for informational and record purposes prior to construction. These details must be prepared and/or approved by a Professional Engineer. The Contractor shall construct the platform in accordance with the details submitted to the Engineer and the results obtained by the use of the platform design are the Contractor's responsibility. Traffic shall not be allowed to travel under a portion of platform being installed or removed.

Construction & Removal of Bridges Over Railroad. For special safety requirements during the construction of Bridge No. 07499 over the railroad, see Special Provision "Insurance, Construction, and Flagging Requirements on Railroad Property (UPRR)".

Payment. No direct payment will be made for this work. It shall be considered subsidiary to other items in the contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

SHORING FOR CULVERTS

DESCRIPTION: Work under this item shall consist of the design, construction, and removal of a shoring or bracing system that may be required to retain the existing, temporary, or new roadway embankment and to maintain traffic during construction of culverts. The shoring system shall provide sufficient clearance for excavation and construction work and shall ensure the safety of the traveling public and workmen at all times.

WORK TO BE PERFORMED: Prior to construction of the shoring system, the Contractor shall submit the design and details of the system to the Engineer for informational and record purposes. Such submission shall include the design calculations, the kind and condition of materials to be used, working drawings showing all dimensions, and the procedure for installation of the system. The design and details submitted shall be prepared and/or approved by a Professional Engineer registered in Arkansas.

The Contractor shall be responsible for the adequacy of the temporary shoring during the entire period of construction. The Contractor shall be responsible for any and all damages and/or claims, including injury or death, arising out of the construction and use of temporary shoring.

The Contractor shall construct the shoring in accordance with the details submitted to the Engineer for informational purposes. Unless otherwise permitted by the Engineer, all components of the shoring system shall be removed upon completion of their use and shall remain the property of the Contractor.

PAYMENT: No direct payment will be made for work described in this special provision (which includes preparation of necessary design details and drawings, construction and removal of shoring, and for all materials, labor, tools, equipment, and incidentals necessary to complete the work) but shall be considered subsidiary to other pay items in the contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PROSECUTION AND PROGRESS WITH BID SCHEDULE

Subsection 108.02(a) is hereby deleted and the following is substituted therefore:

108.02 Prosecution of Work.

(a) Preconstruction Conference. Before beginning the work specific to the project and unless waived by the Engineer, a preconstruction conference shall be held at a mutually agreed upon time and place. The Engineer will notify subcontractors, utility companies, and other interested parties of the time and place of the preconstruction conference. The Contractor shall submit the following to the Engineer before or at the preconstruction conference:

- A company safety plan and the name of the safety officer;
- An EEO/affirmative action plan and the name of the EEO officer;
- A list of key project personnel and their phone numbers;
- A list of proposed subcontractors;
- The names of Material Testers.

Subsection 108.02(b)(4) and the remainder of Subsection 108.02 is hereby deleted and the following is substituted therefore:

(c) Full Work Order.

(1) Calendar Day Contract. Unless the Contractor is otherwise advised in writing, the Work Order of a calendar day contract shall become effective on the fifteenth calendar day following the execution of the Contract. Should the effective date fall on a Saturday, Sunday, or legal holiday; Monday following a holiday on Sunday, or Friday preceding a holiday on Saturday, the effective date shall be the next work day. The assessment of contract time shall begin on the date the Contractor actually begins work or no later than as specified in the Special Provision "Flexible Beginning of Work - Calendar Day Contract".

Only work specified in SS 108-2 may begin before the assessment of contract time begins.

(2) Allocation of Department Resources. The Department allocates its resources to a contract based on the total time allowed in the Contract. However, should the Contractor propose an accelerated work schedule, the Department will provide the necessary resources to meet the demands of the accelerated work schedule. Utility and/or Right of Way (ROW) related delays are exempt from impact claims for the first ninety (90) days after the work order date.

(d) CPM Schedule.

(1) General. Prepare and submit to the Engineer a Critical Path Methodology (CPM) schedule in accordance with Section (j) "General Requirements of the Project Schedule" of this special provision utilizing scheduling best practices.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PROSECUTION AND PROGRESS WITH BID SCHEDULE

The schedule shall be used to plan, coordinate, and manage the work, whether the Contractor's personnel are performing the work or not. Copies of the complete baseline schedule, update schedules, and revised schedules shall be shared with all subcontractors, suppliers, and utility companies affected by the work.

Float is a shared commodity and is not for the exclusive use or benefit of any party. It is available to all parties as needed until it is consumed.

(e) Project Scheduling. Time is of the essence and the contract time requirement is a key factor for success to both the Department and the Contractor. All time limits stated in the Contract Documents are of essence to the Contract. The purpose of the Department requiring the project schedule shall be to:

- Ensure adequate planning during the prosecution and progress of the work in accordance with the allowable number of calendar days and all milestones identified by the Contract;
- Assure coordination of the efforts of the Contractor, Department, Utilities, and others that may be involved in the project;
- Assist the Contractor and Department in monitoring the progress of the work and evaluating proposed changes to the Contract;
- Assist the Department in administering the contract time requirements;
- Ensure that the project is planned for the entire project duration and completed within the contract time as bid.

The observance of the requirements herein is an essential part of the work to be performed under the Contract. No direct compensation will be allowed for fulfilling these requirements, as such work is considered subsidiary to the various bid items of the Contract.

(f) Personnel. The Contractor shall provide an individual, referred to hereafter as the Scheduler, to create and maintain the project schedule. The Scheduler shall be proficient in CPM development and analysis of resources, and shall be able to perform the required tasks using the specified software. The Scheduler shall be present, in person or via tele-conference at the discretion of the Engineer, at all CPM update meetings and made available for discussion or meetings when requested by the Engineer.

(g) Bid Schedule.

(1) General. The apparent low bidder shall provide an electronic ".xer" file, a PDF schedule report, and a bid schedule narrative to the Department's Program Management Division, via Doc Express, by 4:30 p.m. by the 5th calendar day following the opening of bids. Should the apparent low bidder fail to submit the bid schedule and the bid schedule narrative within the time allotted, the proposal will be rejected and the proposal guaranty will be returned to the bidder. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and constructed under contract or otherwise, as the Commission may decide. The low bidder who failed to produce an acceptable bid

schedule, bid schedule narrative, or both will not be permitted to bid on any subsequent advertisement of the project.

(2) The Department shall review and verify the constructability of the bid schedule prior to contract award. At a minimum, the bid schedule shall contain the following:

- Include external constraints (outside Contractors work, utilities, permitting, Short Term Activity Authorizations (STAA), ROW clearance, etc.). Use the dates provided in the respective Special Provisions.
- High-level activities summarized by the Work Type Code as set forth in the "Activity Codes/Work Type" section of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/Construction Contractors/General Information /Structure of Project Schedule on the ARDOT website shall be represented in the schedule for each stage.
- Full scope of work for the entire project duration (bid contract time) clearly reflecting the MOT (Staging) plan as reflected in the bid documents in accordance with the MOT (Staging) plan described in the bid documents in accordance with the Work Breakdown Structure (WBS) sections of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/Construction Contractors/General Informatio n/Structure of Project Schedule on the ARDOT website to level 3 detail of the WBS.
- The bid schedule shall be a CPM logic driven schedule.
- Appropriate work calendars shall be developed and applied for the various activities in accordance with all calendar references under Section (j) "General Requirements of the Project Schedule" of this special provision. Calendars shall include specified holidays, Sundays, and include anticipated adverse weather days.

(3) Bid Schedule Narrative. A schedule narrative shall be provided with the Bid Schedule proposal, and shall include the following information:

- General description of the workflow and plan for completing the project.
- A Time-Line illustrating the MOT (Staging) plan including key milestones such as utility turnover dates, migrating bird netting, ROW clearance date, etc.
- The working days per week, the number of shifts per day, the number of hours per shift, the holidays to be observed, and a description of how the schedule will account for adverse weather days.

(4) Criteria for Acceptance of the Bid Schedule.

- The bid schedule narrative shall meet all criteria as shown in the "Bid Schedule Narrative" subsection of this special provision.
- High level activities shall be included for all applicable Work Type codes for the full scope of work.
- The bid schedule shall be organized by the MOT (Staging) plan described in the bid documents in accordance with the "WBS Structure" sections of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/Construction Contractors/General Information/Structure of Project Schedule on the ARDOT website to level 3 detail of the WBS.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PROSECUTION AND PROGRESS WITH BID SCHEDULE

- The bid schedule shall be a CPM logic driven schedule.
- The bid schedule shall contain appropriate work calendars reflecting holidays, Sundays, and a reasonable number of adverse weather days.
- The bid schedule shall indicate that the work can be reasonably assumed to be completed in the calendar days bid.

The bid schedule and bid schedule narrative submitted by the apparent low bidder will be reviewed by the Department to determine if the criteria noted in this Special Provision have been met. If it is determined by the Department that the submitted bid schedule, bid schedule narrative, or both do not meet the specified criteria, the bidder will be notified in writing, detailing the issues of concern and allowed the opportunity to submit a revised bid schedule, bid schedule narrative, or both. The revised bid schedule, bid schedule narrative, or both must be submitted within two business days of notification. If the revised bid schedule, bid schedule narrative, or both are deemed unacceptable or not submitted within two business days of notification, just grounds exist for rejection of the proposal. In this case, the bidder will be notified that an acceptable bid schedule, bid schedule narrative, or both have not been submitted and will be provided an opportunity for administrative reconsideration. A request for administrative reconsideration must be submitted to the Chief Engineer within two business days of the Department's notification. As part of the administrative reconsideration, the bidder may provide corrections or arguments concerning the issue of whether the bid schedule and bid schedule narrative meet the specified criteria. The Chief Engineer will render a written decision on the reconsideration explaining the basis for the finding. If the Chief Engineer determines that a bid schedule and a bid schedule narrative are not produced that meet the specified criteria, or no administrative reconsideration is requested, the proposal will be rejected and the proposal guaranty will be returned to the bidder. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and constructed under contract or otherwise, as the Commission may decide. The low bidder who failed to produce an acceptable bid schedule, bid schedule narrative, or both will not be permitted to bid on any subsequent advertisement of that project.

(h) Baseline Schedule.

(1) General. The Contractor shall provide the Baseline Schedule to the Engineer as soon as possible after notification of contract award. The Engineer will review the Baseline Schedule per Section (j) "General Requirements of the Project Schedule" of this special provision, and notify the Contractor of its acceptability. **The Contractor will not be allowed to start work until the Baseline Schedule has been approved by the Engineer. The contract time will start no later than that specified in the Special Provision "Flexible Beginning of Work - Calendar Day Contract" after the issuance of the work order. No time extension shall be considered for failure to submit an acceptable Baseline Schedule within the time period specified above.**

(2) Baseline Schedule Narrative. The schedule narrative shall not be considered notification of delays, requests for change orders, or other issues. The Contractor shall

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provide a schedule narrative with the Baseline Schedule including the following information and topics as laid out:

- General description of the workflow and plan for completing the project.
- A timeline illustrating the MOT (Staging) plan according to bid documents; including key milestones such as utility turnover dates, migratory bird netting, ROW clearance date, etc.
- A description of the longest path.
- Subcontractors, equipment (full and part time noted), monthly crew staffing plan.
- List of completion dates for all major milestones.
- The work days per week, the number of shifts per day, the number of hours per shift, and the holidays to be observed, and a description of how the schedule accounts for adverse weather days.
- Activities requiring coordination with the Department, utilities, other parties, etc. (external constraints).
- Attachment defining each crew completely, describing the equipment, including number and type, required to carry out the work. The number of crews is to be defined by the Contractor. It is expected that a sufficient number of crews will be developed to correspond to the Contractor's plan to complete the project within the time specified. At a minimum, please include a list containing a legend for all abbreviations/acronyms.

Baseline Schedule Joint Review, Revision, and Acceptance. Within fifteen (15) calendar days of receipt of the Contractor's proposed Baseline Schedule, the Engineer shall evaluate the schedule for compliance with this specification and notify the Contractor of the findings. If the Engineer requests a revision or justification, the Contractor shall provide a satisfactory revision or adequate justification to the satisfaction of the Engineer within five (5) calendar days. The Contractor will not be allowed to start work until the Baseline Schedule has been approved by the Engineer.

The contract time will start no later than that specified in the Special Provision "Flexible Beginning of work – Calendar Day Contract" after the issuance of the work order. The Baseline Schedule submitted for acceptance must be sequenced according to the MOT plan provided in the contract documents. If the Contractor submits a Baseline Schedule for acceptance that is based on a sequence of work not in the plans, it will be rejected by the Engineer.

The Engineer's review and acceptance of the Contractor's Baseline Schedule is for conformance to the requirements of the Contract documents only. Review and acceptance by the Engineer of the Contractor's project schedule does not relieve the Contractor of any of its responsibility for the project schedule, or of the Contractor's ability to meet interim milestone dates (if specified) and the contract completion date, nor does such review and acceptance expressly or by implication warrant, acknowledge or admit the reasonableness of the logic, durations, manpower or equipment loading of the Contractor's Baseline Schedule. In the event the Contractor fails to define any element of work, activity or logic and the Engineer review does not detect this omission or error, such

omission or error, when discovered by the Contractor or Engineer, shall be corrected by the Contractor at the next schedule submittal and shall not affect the project completion date.

At a time agreeable to the Engineer, the Contractor shall conduct a **Baseline Schedule Presentation Meeting** within seven (7) calendar days after submitting the proposed Baseline Schedule. The purpose of this meeting is for the Contractor to present the Contractor's schedule. The following is a minimum to be covered at the joint review of the schedule:

- Work Breakdown Structure (WBS)
- Sequence of work - step through the schedule activity by activity
- Resources - to include crews and production rates used
- Longest path Review

(3) Criteria for Acceptance of Baseline Schedule. The Engineer will accept a schedule based on the following:

- Baseline Schedule Presentation review meeting.
- Conformance with Section (j) "General Requirements of the Project Schedule" of this special provision and any other contract requirements.

The Engineer's acceptance of a schedule:

- Does not modify the Contract.
- Does not constitute endorsement or validation by the Engineer of the Contractor's activity logic, activity durations, or assumptions in creating the schedule.
- Does not guarantee that the project can be performed or completed as depicted in the schedule.
- Does not relieve the Contractor of its obligation or responsibility to submit complete and accurate information.

If the Contractor or Engineer discovers an error after the Engineer has accepted a schedule, the Contractor shall correct the error in the next schedule submission.

The Contractor will not be allowed to start work until the Baseline Schedule has been approved by the Engineer.

(i) Update Schedule.

(1) General. On a bi-weekly basis and in alignment with each pay estimate, the Contractor shall perform a complete update including the application of actual resource units. The bi-weekly schedule update shall be provided with each pay estimate. A .pdf schedule report shall be provided to the Engineer, showing each activity's original duration, remaining duration, percent complete, start date, finish date, material resource name, budgeted quantity, actual quantity, quantity to complete, and unit of measure as an attachment to the pay estimate. An electronic ".xer" backup file of the schedule shall be submitted to the Engineer. The Contractor's scheduler must attend each bi-weekly

schedule update; either in person, via computer, or tele-conference as determined by the Engineer. The following reports shall be provided as determined by the Engineer; three (3) week look-ahead, critical activities (longest path), productivity/quantities, actual/planned.

The project schedule and narrative shall be updated and submitted in accordance with Section (j) "General Requirements of the Project Schedule" of this special provision every twenty-eight (28) days (every other bi-weekly update) to align with pay estimates. The project schedule shall be updated during a joint project schedule update meeting that will be attended by the appropriate Engineers and Contractor representatives. The Contractor's scheduler must attend the joint project update meeting; either in person, via computer, or tele-conference as determined by the Engineer. The joint project update meeting shall occur within no more than three (3) business days from the pay estimate date. All schedule submittals and time restrictions are required unless otherwise approved by the Engineer in writing. The schedule shall be submitted no later than close-of-business two (2) business days after the joint project schedule update meeting.

The Contractor shall meet with the Engineer to review and input into the project schedule the actual progress made until the data date of the schedule update. The review of progress will include dates for activities actually started and/or completed, and the duration percentage of work completed or remaining duration on each activity started and/or completed. The percentage of work completed shall be calculated by using the quantity and production rate information.

(2) Assignment of Baseline Schedules. The following Baseline Schedules shall be assigned prior to submission of schedule updates. The submitted schedule ".xer" backup file shall contain the following assigned Baseline Schedules:

- Project Baseline - assign the approved Baseline Schedule.
- Primary Baseline - assign the approved update from the prior month
- Secondary Baseline - assign the approved update from 2 months prior

(3) Store Period Performance. The "Store Period Performance" function shall be performed every twenty-eight (28) days (every other bi-weekly update) to align with pay estimates and the full schedule, reports, and narrative submittal to lock in actual-this-period units to coincide with the joint project update meeting prior to submission of the schedule update for review and disposition.

Failure to attend the scheduled update meeting or submit the schedule update within the specified period may result in the stoppage of work until the Department receives the schedule update and future withholding of estimate payments until the specified evaluation time has elapsed and the Contractor receives approval from the Engineer.

(4) Update Schedule Narrative. The schedule narrative shall not be considered notification of delays, Requests for Changes Orders, or other issues. A schedule

narrative shall be provided with each schedule update including the following information and topics as laid out:

- General description of status and what occurred during update period.
- Issues - known and potential
- Mitigation efforts associated with each issue
- General description of planned work during next update period
- Material quantities must align with estimate item codes and schedule resources.
- Schedule Related RFI's
- Schedule Related Change Orders and/or Proposals
- Attached default Claim Digger report
- Oracle Primavera schedule log report

(5) Update Schedule Joint Review, Revision and Acceptance. Within seven (7) calendar days of receipt of the Contractor's submitted Update Schedule, the Engineer shall evaluate the schedule for compliance with this specification, and notify the Contractor of the findings in writing. If the Engineer requests a revision or justification, the Contractor shall provide a satisfactory revision or adequate justification to the satisfaction of the Engineer within seven (7) calendar days. **Failure to provide revisions or justification within seven (7) calendar days may result in future withholding of estimate payments and/or the stoppage of work until a satisfactory response has been received, the specified evaluation time has elapsed, and the Contractor receives approval from Engineer.**

The update schedule submitted for acceptance must be sequenced according to the MOT plan provided in the contract documents. If the Contractor submits an update schedule for acceptance that is based on a sequence of work not previously approved by the Engineer, it will be rejected. Any MOT change of sequence must be submitted and approved through the change order process before inclusion in the Schedule.

The Engineer's review and acceptance of the Contractor's project schedule is for conformance to the requirements of the contract documents only. Review and acceptance by the Engineer of the Contractor's project schedule does not relieve the Contractor of any of its responsibility for the project schedule, or of the Contractor's ability to meet interim milestone dates (if specified) and the contract completion date, nor does such review and acceptance expressly or by implication warrant, acknowledge, or admit the reasonableness of the logic, durations, manpower, or equipment loading of the Contractor's project schedule. In the event the Contractor fails to define any element of work, activity, or logic and the Engineer review does not detect this omission or error, such omission or error, when discovered by the Contractor or Engineer, shall be corrected by the Contractor at the next schedule submittal and shall not affect the project completion date.

(j) General Requirements of the Project Schedule.

(1) Scheduling Requirements. The following requirements are the minimum for the project schedules submitted by the Contractor to be in compliance with the Contract

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Documents. The project schedule shall employ computerized CPM for the planning, scheduling, and reporting of the work as described in this specification. The project schedule shall be prepared using the Precedence Diagram Method. The Contractor shall create and maintain the project schedule using scheduling software compatible with Engineer supported scheduling software. The Project will use Oracle Primavera P6 v8 or newer mutually agreed upon version of Oracle Primavera, which shall mean that the Contractor provided electronic file version of the project schedule may be loaded or imported by the Department with no modifications, preparation, or adjustments.

All scheduling software settings within the scheduling/leveling dialog box shall remain 'default' unless otherwise approved by the Department. The Contractor shall use retained logic for calculating all project schedules. Out-of-sequence Work shall be itemized and described in the monthly schedule narrative and discussed at monthly project schedule update meetings.

The Schedule will be prepared showing construction to the full contract time.

The Contractor shall create and maintain a CPM project schedule showing the manner of prosecution of work that he intends to follow in order to complete the contract within the allotted time.

- The project schedule shall show the sequence and interdependence of activities required for complete performance of the work. At a minimum all pay items shall be accounted for in the activities in the schedule including all If and Where Directed Items showing the plan quantity being utilized. The Contractor shall be responsible for assuring all work sequences are logical and show a true and coordinated plan of the work.

Each activity in the project schedule shall be described by:

- An activity ID (number) utilizing an alphanumeric designation system tied to the traffic control plans, as described in the "Activity ID Structure" section of the "Schedule Structure" document located at www.ardot.gov/Contractor_Information/Construction Contractors/General Information/Structure of Project Schedule on the ARDOT website and that is agreeable to the Engineer. At no time shall an activity ID be changed from one schedule version to another (i.e. from bid schedule to baseline schedule to update schedules and between monthly updates).
- Concise and unique description of the work represented by the activity name with no duplicate activity name within the project schedule as described in the "Activity Naming Convention" section of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/Construction Contractors/General Information/Structure of Project Schedule on the ARDOT website; and
- Activity durations in whole days with a maximum of twenty (20) calendar days. Longer durations may be used for non-construction activities (mobilization, submittal preparation, curing, etc.), and other activities mutually agreeable between the Engineer and Contractor.

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- An activity duration shall be based on the quantity for the individual work activity divided by a production rate. Activities that have varying production rates may be required to be separated into multiple activities by the Engineer.
- A User Defined Field shall be utilized to assign production rates to their associated activities and resources. The User Defined Fields shall be developed and structured in accordance with the "User Defined Field" section of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/Construction Contractors/ General Information/Structure of Project Schedule on the ARDOT website.

The activities shall be coded so that organized plots/layouts of the project schedule may be produced as described in the "Activity Codes" subsection of this special provision.

The activities shall be assigned to a WBS as described in the "WBS Structure" sections of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/ Construction Contractors/General Information/Structure of Project Schedule on the ARDOT website.

Administrative activities and milestones shall be incorporated into the schedule and assigned to the 'Admin/Milestones" WBS level as follows:

- All milestones identified by the Contract shall be reflected as start milestones with a 'start no earlier than' constraint or finish milestones with a 'finish no later than' constraint.
- Project Start-Start Milestone for work prior to work order.
- (NTP/Work Order Start)-Start Milestone for work after work order.
- Stage Complete-Finish Milestone for each stage of the project (shall not be constrained unless necessary to reflect MOT (Staging) plan)
- Substantial Completion-Finish Milestone to follow all contracted work scope and punch-list activities required for beneficial use. A Project Level "Must Finish By" date shall be applied on Calendar Day and Fixed Completion Date contracts. Note that the project level "Must Finish By" constraint is as-of 12:01 am.
- Project Complete-Finish Milestone to follow all close-out activities after substantial completion.
- Contract Days-No Level of Effort activities are to be used with the exception of a Level of Effort activity used for tracking the planned, actual, and remaining contract days. Relationships to be Start-to-Start (SS) with NTP/Work Order-Start milestone and Finish-to-Finish (FF) with Substantial Completion milestone. This activity will reflect total contract duration and track actual days charged against contract duration.
- Additional milestones used by the Contractor shall be approved by the Engineer.
- Constraints-only constraints associated with the WBS, phasing, staging, milestones, or project completion dates specified in the Contract are allowed. Any constraints to be utilized on the schedule other than the aforementioned dates must be authorized in advance by the Engineer.
- No lags shall be used on Finish-To-Start relationships and no negative lags shall be used at any time.
- No Start-to-Finish relationships shall be used at any time.

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- No activity shall have only Start-to-Start successor relationship(s) or only Finish-to-Finish predecessor relationship(s).
- Critical path shall be determined by the longest path.
- No activity shall contain scope that represents multiple Contractors, trades, or types of work.
- The Contractor shall resource-load the project schedule by assigning every construction activity the appropriate material and equipment resources which align with the Contractor's project plan and directly correlate to and support the Estimate Item Codes (Schedule of Values).
- Only project calendars shall be used. No global calendars may be used. Separate calendars shall be developed and assigned to activities for various Work Types, as appropriate.
- Seasonal weather conditions shall be considered and included in the project schedule for all work influenced by temperature and/or precipitation. Seasonal weather conditions shall be determined by an assessment of average historical climatic conditions. Average historical weather data is available through the National Oceanic and Atmospheric Administration (NOAA), company historical records, or any additional reference the Contractors deems necessary to prepare an accurate schedule. These effects will be simulated through the use of work calendars for each major work type (i.e., earthwork, concrete paving, structures, asphalt, drainage, etc.) for all activities.
- The work calendars shall be updated each month to reflect the actual days worked.
- Total Float is the amount of time that an activity can be delayed from its early start date without delaying the project finish date. Free Float is the amount of time that an activity can be delayed without delaying the early start date of any successor activity. Float time in the project schedule is a shared commodity between the Department and the Contractor. Suppression or consumption of float shall not be allowed, including by use of extended activity durations, dummy activities, unspecified or unnecessary milestones, unnecessary logic ties, or preferential sequencing.

At a minimum, include the following work activities, as applicable:

- Work to be performed by the Contractor, subcontractors, and suppliers.
- Work to be performed by the Department and third parties.
- The project start date, scheduled completion dates, and other milestones required by the Contract, start or finish dates for phases, or site access or availability dates.
- Submittal review and approval activities when applicable, including time for the Department's approval as specified in the Contract.
- Fabrication, delivery, installation, testing, and similar activities for materials, plants, and equipment.
- If and where directed items shall be included in the schedule as an activity showing the plan quantity being utilized.
- Sampling and testing periods.
- Settlement or surcharge periods.
- Cure periods.
- Utility notification and relocation identified in the Contract.

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- Installation, erection, and removal identified in contract documents and similar activities related to temporary systems or structures.
- Required acceptance testing, inspections, or similar activities.
- Activities representing acquisition of any necessary permits to be obtained by the Contractor or acquisition of right of way when a delay of occupancy is included in the contract documents.
- Activities shall not be deleted from the schedule. If scope or activity no longer applies, close the activity using the following process:
  - Apply actual start and finish date.
  - Remove activity from current sequence string.
  - Add predecessor of Project start and successor of project complete.
  - Add negative resource quantity(s) so as to have a quantity sum of zero (0).
  - Add note on activity explaining the reason for closing the activity and add the word "CLOSED" to the activity description.
  - Ensure explanation is included in the monthly narrative.

(2) Resource Loading

All construction activities shall be resource loaded as follows:

- Labor resources assigned with associated crews.
- Material resources assigned with associated quantities and appropriate units of measure such as to allow for earned value, production analysis, and s-curves. All material quantities shall be carried on material resources in alignment with and equal to the estimate item code "schedule of value line items" bid/contract quantities.
- Major equipment shall be assigned as resources with associated hours.

(3) Store Period Performance. At the end of each update cycle, "Store Period Performance" shall be performed to lock in actual-this-period units prior to submission of the schedule update for review and disposition. This should occur every twenty-eight (28) days in conjunction with a pay estimate and the full schedule, reports, and narrative submittal.

(4) Earned Value Rules (Performance Measurement). All scheduling software settings within the Earned Value, User Preference Calculations, and User Preference Resource Analysis dialog boxes shall remain 'default' unless otherwise approved by the Department.

(5) Level of Schedule Detail/Submission Requirements. Each project schedule submittal shall include a ".xer" electronic backup file and three (3) plots in .pdf or other format as determined by the Engineer with the activities logically grouped using the Project's WBS and then by Work Type activity code as set forth in the "WBS" and "Activity Codes" sections of the "Schedule Structure" document located at www.ardot.gov/Contractor Information/Construction Contractors/General Information/Structure of Project Schedule on the ARDOT website and sorted by start date and total float:

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- One bar chart plot showing the entire project schedule, with the longest path through the schedule readily discernible; and
- The second bar chart plot showing only the longest path;
- The third bar chart plot showing a 60-day Look-Ahead schedule, starting with the data date, containing no completed activities.

(6) Project Schedule Revisions. If the Contractor desires to make changes in the project schedule, the Contractor shall notify the Engineer in writing prior to making the revisions. The written notification shall include the reason for the proposed revision, what the revision is comprised of, and how the revision was incorporated into the schedule. In addition to the written notification of the revision, the Contractor shall include a ".xer" electronic backup file of the project schedule that includes the revision and one logically organized plot of the project schedule if requested by the Engineer.

The Department may request the submission of a revised schedule if any of the following circumstances occur:

- There is a delay (actual or projected) to the scheduled milestone or project completion dates.
- There is a difference between the actual sequence or durations of the work and the sequence or durations depicted in the last accepted schedule.
- The Department executes a contract revision that adds or deletes work, modifies the planned sequence of work, or modifies the means and methods of its performance.

The requirement to prepare a revised schedule is not a directive by the Department to accelerate the work.

Prepare and submit the revised schedule as soon as the need for a revised schedule is necessary, but no more than five (5) business days after the Department's request.

Within five (5) business days of receipt of the revised schedule, the Department will respond in writing either accepting the revised schedule or rejecting the revised schedule and identifying the reasons for rejection, or requesting more information. Within five (5) business days after the date of the Department's written response, address the reasons for rejection and resubmit the revised schedule or provide the information requested.

(7) Recovery Schedules. If the work is delayed such that the projected finish date of any completion deadline or contract milestone, in the current update schedule, is behind by twenty-eight (28) calendar days, then the Contractor shall provide a Recovery Schedule within seven (7) calendar days, including a recovery plan detailing how the delay will be recovered and the completion deadline(s) achieved, prior to submittal of its next monthly update schedule. The Recovery Schedule shall demonstrate the Contractor's plan to regain lost progress and achieve all completion deadlines per the Contract Documents.

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(8) Change Orders. Any and all change orders affecting schedule durations, sequencing, and/or material, or equipment quantities shall be incorporated into the schedule, whether additive or deductive.

A fragnet shall be developed for all potential change orders. The fragnet and Time Impact Analysis (TIA) shall be submitted for inclusion with the change order. Failure to submit a fragnet with the change order forfeits any recovery for an associated recoverable project delay at any future date.

Approved Change Orders shall be incorporated into the current schedule with the activity(s) clearly identified and reflected as to the change order number the items are associated with. Potential time extensions based on change orders will be analyzed based on the most recent approved schedule, impact to the longest path, and subsequent movement of the current project completion date in accordance with the Evaluation of Delays and Calculation of Time Extensions section of this special provision.

For each added Change Order activity, the activity ID shall have CO plus the change order number added to the end of the standard activity ID structure. The activity description shall have CO plus the change order number added to the beginning of the standard activity description structure. Leading zeros should be included as part of the three (3) digit change order number.

For Change Orders only affecting resource quantities (not requiring new activities), the changer order resources may be added to existing activities, as appropriate, in accordance with the change order scope.

a. Change Order Resources. Resources shall be created and assigned to activities for each approved change order, whether the resource resides on an existing or new change order activity. Change order resources shall include the entire scope of the change order. The resource code shall have CO plus the change order number added to the end of the standard resource ID structure. The resource description shall contain CO plus the change order number. Any leading zeros should be included as part of the change order number. All resource and cost loading rules apply to change orders.

Subsection 108.06 is hereby deleted and the following is substituted therefore:

108.06 Determination of Time of Completion and Extension of Contract Time.

(a) General. The time bid by the Contractor for the completion of the work included in the Contract will be stated in the proposal and Contract, and will be known as the "Contract Time". The contract time will be specified as calendar days.

The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project according to the plans and specifications within the contract

time. The Contractor shall advance the work so that the available time is appropriately utilized in order to complete the work within the contract time.

Unless an emergency is declared, the Contractor shall not perform work that requires inspection on Sundays or legal holidays designated in Subsection 101.01(c) and the actual holiday if it falls on a Saturday or Sunday. If the Commission declares Friday following Thanksgiving Day as a Department recognized holiday, the Contractor shall not perform work that requires inspection. These days shall be charged in a Calendar Day contract.

No claim for an extension of time will be considered as a result of failure of the Engineer to furnish interpretations of the plans and specifications until 30 calendar days after receipt of such demand in writing as required by Subsection 105.01, and not then unless such request for an interpretation is clearly presented for understanding, reasonable and made in good faith.

The Engineer will determine the date upon which the Contract is substantially complete and time assessment will cease. In the event cleanup is necessary or items found at the final inspection are to be corrected, the Contractor shall complete this work in a timely manner or the Engineer will resume time charges.

(b) Calendar Days. When the contract time is specified in calendar days, time will be assessed for each calendar day in accordance with the Special Provision “Flexible Beginning of Work - Calendar Day Contract”. A calendar day is defined under Subsection 101.01.

The Contractor shall take into consideration all normal conditions considered unfavorable to the progress of the work and place a sufficient work force and equipment on the project to ensure completion of the work with the contract time. Inaccessibility to a portion of the work due to utility conflict or utility work will be considered as an adverse condition for time exceeding that specified in the Contract for the utility adjustment.

Contract time will not be assessed during a full suspension of the work as ordered by the Engineer. Contract time will be assessed during a Partial Work Order period according to Subsection 108.02(b)(3). During a partial suspension of the work as ordered by the Engineer, the contract time will be assessed in direct proportion to the ratio of the money value of the items not suspended to the total contract amount.

(c) Extensions to the Contract Time. The Contractor shall immediately notify the Engineer of a delay once the Contractor becomes aware of the delay, not at the conclusion of the delay. The Contractor waives entitlement to a time extension or compensation for delay or costs incurred before the Contractor notified the Engineer of the delay.

Only Department responsible delays in activities that affect the milestone dates or the contract completion date, as determined by CPM analysis, will be considered for a time extension.

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The Contractor's plea that the contract time was insufficient is not a valid reason for an extension of time. When the time as extended by the Department falls on a date that is a Sunday or holiday, the Engineer will extend the contract time to the next business day.

The Department will evaluate the Contractor's documentation and analysis, and determine the time extension due, if any. The Department will not evaluate a request for an extension of the contract time or revise the contract time unless the Contractor notifies the Department in accordance with the contract documents and specifications.

The Engineer will evaluate delays and requests for extensions or revisions to phased or interim start or finish dates, or durations for portions of the project in the same manner as requests for an extension of the contract time for the project as a whole. Comply with the requirements of this subsection when seeking a time extension for phased or interim start or finish dates or durations.

In the event that the Department extends the contract time into a period of the year during which the working conditions are less favorable, the Department will consider a further extension of time based on the nature of the work the Contractor scheduled to perform during the less favorable period. Conversely, if the Department extends the contract time into a period of the year during which the working conditions are more favorable, the Department will consider reducing the contract time extension. If the Department reduces the work required to complete the project or relaxes phase or stage requirements, the Department may reduce the contract time.

(d) Evaluation of Delays and Calculation of Time Extensions. The Engineer will evaluate the Contractor's request for a time extension based on the Contractor's compliance with the following requirements:

- Base all evaluations of delay and all calculations of the appropriate time extensions due on the schedules submitted to and accepted by the Department and current at the time the delay occurred, not schedules created after the delay occurred.
- The delay is on the longest path when the delay occurred.
- The delay results in a scheduled milestone or project completion date that is later than the date required by the Contract.
- When using a CPM schedule, determine the duration of delays as follows:
  - Use time impact analysis (TIA) to identify and measure critical delays that have not yet occurred. Do not use this method to evaluate delays that have already occurred. In general terms, perform a TIA as follows:
    - Develop a "mini" schedule for the changed work. This schedule is known as a fragnet.
    - Identify the current accepted schedule and record the scheduled completion date on that schedule.
    - Insert the fragnet into the current schedule by properly linking the fragnet with the existing activities in the current accepted schedule.

- Recalculate the current schedule with the fragnet inserted and record this scheduled completion date.
- The difference in the calculated scheduled completion dates between the current schedule and the schedule calculated with a properly inserted and properly composed fragnet is the delay attributable to the changed work. The time extension due, if any, will be based on this delay.

o Use a contemporaneous analysis when evaluating delays that have already occurred. In general terms, perform a contemporaneous analysis as follows:

- Identify the most recent accepted schedule with a data date before the start of the delay being evaluated.
- Identify each accepted schedule in effect during the delay and the schedule with a data date that immediately follows the conclusion of the delay.
- Identify the longest path each day from immediately before the start of the delay to the schedule immediately following the delay.
- Determine whether the delay falls on the longest path.
- If the delay does not fall on the longest path, then no project delay occurred and no time extension is due.
- If the delay falls on the longest path, then determine the number of days the longest path is delayed. The time extension due, if any, will be based on this delay.

(e) Administration of Time Extensions. For a Calendar Day project the Department will provide a time extension by adding calendar days to the contract time.

(f) Excusable, Non-Compensable Delays. Excusable, non-compensable delays are unforeseeable and unavoidable delays that are not the Contractor's or the Department's fault or responsibility. The Contractor is entitled to a contract time extension but not entitled to compensation for delay costs associated with an excusable, non-compensable delay. The following are excusable, non-compensable delays:

- Delays due to floods, tornadoes, earthquakes, or other natural disasters that affect the project in regions which are declared as disaster areas by governing authorities.
- Delays due to utility or railroad work when the Contractor is required to alter operations due to conflicts with utility facilities not shown in the plans or railroads not shown in the plans.
- Utilities exceeding estimated completion dates noted in the contract that affect the longest path.
- The Contract requires the furnishing of critical materials and the Contractor experiences a delay in delivery because of Federal priorities for defense needs or because of nationwide shortages. Additional contract time may be allowed in an amount equal to the actual lost time resulting from such delay. To obtain additional contract time, the Contractor shall document and file with the Engineer all evidence pertaining to the original agreement with the material supplier or manufacturer. This evidence must indicate that delivery would be made at or before the time the materials would be needed in the normal sequence of construction operations for incorporation in the work.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PROSECUTION AND PROGRESS WITH BID SCHEDULE

- In the event that no prior agreement has been made for furnishing a critical material, and the Contractor is unable to locate a supplier or manufacturer that can deliver the material when needed, the Engineer shall be advised of this situation in writing, indicating the date that delivery will be made and the date of the original request for such material. In either of these situations, when work has progressed to the point that critical materials not delivered are delaying progress of the project, the Contractor may make a written request to the Engineer for additional contract time.
  - Delays due to civil disturbances or acts of war or terror.
  - Delays due to epidemics or quarantines.
  - Delays due to labor strikes that are beyond the control of the Contractor, subcontractors, or suppliers and are not caused by the improper acts or failures of the Contractor, subcontractor, or supplier.

(g) Excusable, Compensable Delays. Excusable, compensable delays are delays that are not the Contractor's fault or responsibility but are the Department's fault or responsibility. The Contractor is entitled to a contract time extension and to compensation for delay costs associated with an excusable, compensable delay that affects the longest path. The Department will determine compensation for an excusable, compensable delay. The following are excusable, compensable delays:

- Delays due to an Engineer-ordered suspension.
- Delays due to the Department's neglect.
- Delays due to subsection 104.02(b) "Significant Changes in the Character of Work" that directly delay the longest path. Compensation will be as allowed under subsection 104.02(b).
- Delays due to subsection 104.02(c) "Differing Site Conditions" that directly delay the longest path. Compensation will be as allowed under subsection 104.02(c).

(h) Non-Excusable Delays. Non-excusable delays are delays that are the Contractor's fault or responsibility or delays that the Contractor could have foreseen or avoided, and weather delays not covered by the events listed in the "Excusable, Non-Compensable Delays" subsection of this special provision. Delays due to the Contractor's, subcontractors', or suppliers' insolvency or performance are neither excusable, nor compensable. The Contractor is not entitled to a time extension or compensation for a non-excusable delay.

(i) Concurrent Delays. Concurrent delays are separate delays to critical activities occurring at the same time. When a non-excusable delay is concurrent with an excusable delay, the Contractor is not entitled to a time extension for the period the non-excusable delay is concurrent with the excusable delay. When a non-compensable delay is concurrent with a compensable delay, the Contractor is entitled to a contract time extension but not entitled to compensation for the period the non-compensable delay is concurrent with the compensable delay.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

AIRPORT CLEARANCE REQUIREMENTS

Project 080457 is in the vicinity of Cantrell Field Airport. The project meets F.A.A. clearance requirements for all equipment that does not extend over nearby trees and overhead utilities, within the entire right-of-way of Job 080457.

The Contractor is encouraged to contact the Airport Manager at (501) 358-6200 before any construction takes place on the project to resolve any possible conflicts with aircraft operations and coordinate with a possible issuance of “Notice to Airmen” statements.

The Contractor for this project shall not use any equipment that extends above the roadway more than the height of nearby overhead utilities within the 080457 limits without the permission of the F.A.A.

Should the Contractor decide to use equipment that exceeds height restrictions, they shall file a Notice of Proposed Construction with the F.A.A. a minimum of 45 days prior to the use of the equipment.

The Contractor shall follow the instructions of the Airport Managers to identify any equipment that will exceed the height restrictions within the limits listed with appropriate warning devices to insure aircraft safety.

Please contact Thale Keisling at (479) 968-2286 with questions regarding the information addressed in this Special Provision.

No direct payment will be made for fulfilling the requirements of this Special Provision, but payment will be considered included in the other contract items.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

ANIMAL PASSAGE SHELVES FOR WILDLIFE CROSSINGS

Description. Galvanized metal shelving system to be installed inside culverts that will provide safe passage under the roadway for wildlife.

Materials. Metal shelving and ramps shall have a mesh floor and solid supporting frame. The entire system, including attachment pieces, shall be made of galvanized steel and shall securely support the shelves and an additional 80 pounds. Shelves shall be two feet wide. The end of the ramps attaching to the shelves shall be two feet wide, flaring to three feet wide at ground level.

Construction Requirements. Any work and/or repairs required to the culvert and/or wingwalls and in the vicinity of the culvert shall be completed before installation of the Animal Passage Shelves and Ramps to prevent damage to the Ramps. Culvert and wingwall work and/or repairs are not covered by this Special Provision.

Install Animal Passage Shelves inside designated culvert structures using galvanized attachments. Shelving shall be installed two feet below the top of the culvert, utilizing brackets that attach to the side of the culvert or wingwall. Shelving shall turn and extend at a level elevation along the wingwall until the shelf is above the top of the wingwall. Flared access ramps shall extend from the ground, over the culvert wingwalls, and be attached to the shelving to allow animal species to access the shelf from the dry ground. Culverts with single Animal Passage Shelves shall require shelving extending from the ramp at the opposing wingwall into the culvert at the angle of the wingwall until it adjoins the full-length shelf.

Four ramps will be required for each culvert. The number of shelves required for each culvert is listed below with the locations.

Passage Structure Locations, Shelf and Ramp Quantities. The Animal Passage Shelves and Ramps shall be installed at the following locations and in the quantities described.

- Structure 1 at Station 7577+46 - This structure is a single-barreled (8’ x 8’ x 218’) concrete box culvert and will require one Animal Passage Shelf on the west side of the culvert and four Ramps.

- Structure 2 at Station 7621+07 - This structure is a double-barreled (8’ x 6’ x 293’) concrete box culvert and will require two Animal Passage Shelves and four Ramps.

Method of Measurement. Animal Passage Shelves and Ramps in place as directed will be measured lengthwise in the center by the linear foot.

Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for Animal Passage Shelves or Ramps, as the case

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

ANIMAL PASSAGE SHELVES FOR WILDLIFE CROSSINGS

may be, which price will be full compensation for furnishing, transporting, handling and installation, including attachment materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	**Pay Unit**
Animal Passage Shelves	Linear Foot
Animal Passage Ramps	Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT

1. General. The process for bidding will take into account not only the contract amount bid but also the bidder's stated delivery time in which the Specified Site Use Work will be substantially complete. This method shall be used to determine the successful bidder and to establish the contract time (calendar days). It shall not be used to determine the award amount nor final payment to the Contractor when the project is completed.

2. Definition of Terms. (a) Specified Site Use Work. The specified site use work, referred to herein as Part C, shall consist of all items of work in the Contract.

(b) Contract Amount. The summation of the products of the quantities shown in the bid schedule multiplied by the unit bid price.

(c) Calendar day. As defined in Subsection 101.01 of the Standard Specifications. Calendar days will be assessed in accordance with the contract Special Provision “Prosecution and Progress With Bid Schedule”.

(d) Contract Time. The number of calendar days established by the bidder to complete the project.

(e) Substantially Complete. The date at which time charges cease due to the completion of all pay items. The Engineer will be the sole authority in determining when the work is substantially complete. Part C Site Use Work will be considered complete on this date.

(f) Daily Road User Cost. The amount which represents the average daily cost to the road user, including but not limited to, user delay costs, vehicle operating costs, crash costs, and emission costs. The daily road user cost for Part C is $4500.

(g) Bid Site Use Time. The number of calendar days specified in the bid by the bidder as the time required to substantially complete the Specified Site Use Work for Part C.

(h) Punch List. A list of items and/or areas of the project requiring correction, replacement, repair, or general cleanup which is furnished by the Engineer following the declaration of the project as Substantially Complete.

3. Preparation of Proposal. The bidder shall establish the number of calendar days to be used to substantially complete the Specified Site Use Work for Part C.

The product of the number of calendar days established by the bidder for Part C multiplied by the daily road user cost of $4500 per calendar day will be added to the contract amount bid. The sum of the two amounts will be the amount used for consideration of bids for award.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT

4. Consideration of Bids. Each bid submitted shall consist of two parts:

(A) The Contract amount.

(C) Total number of calendar days proposed by the bidder to substantially complete the Specified Site Use Work for Part C.

The successful bid will then be determined by the Department as the lowest combination of (A) and (C) according to the following formula:

(A)
+ [(C) x (daily road user cost of $4500)]
= Bid amount for award consideration.

The preceding formula shall be used only to determine the successful bidder and shall not be used to determine the contract award amount nor final payment to the Contractor, except as may be adjusted under sections 6 and 7 below.

5. Assessment of Site Use Time. Site use time will begin in accordance with contract time detailed in the special provision “Flexible Beginning of Work – Calendar Day Contract”.

Unless an emergency is declared or unless allowed by other job provisions, the Contractor shall not perform work that requires inspection on Sundays, legal holidays designated in Subsection 101.01 of the Standard Specifications, Edition of 2014, and Monday following a holiday on Sunday or Friday preceding a holiday on Saturday. If the Commission declares Friday following Thanksgiving Day as a Departmental holiday, the Contractor shall not perform work that requires inspection on this day. These days will be charged in a “Calendar Day” contract.

Extensions of the Bid Site Use Time for Part C will be granted ONLY for the following reasons:

(a) The work has been delayed by any act or omission of the Commission. This includes suspension of the work when the suspension is not the fault of the Contractor.

(b) Change Orders affecting the work that results in additional time being required to complete the Specified Site Use Work.

Requests for extension of the Bid Site Use Time shall be made in writing and shall state the reasons for the request and identify the specific days for which extension is requested.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT

6. Early Completion of Specified Site Use Work. The Contractor will be paid $4500 for each calendar day the Specified Site Use Work is substantially complete before the number of calendar days stated by the Contractor in the bid, including extensions granted in accordance with paragraph 5 above. The maximum number of calendar days for which this payment will be made is 100 days. Payment for early completion will be made after all items identified on the punch list have been completed to the satisfaction of the Engineer.

7. Failure to Substantially Complete the Specified Site Use Work in the Time Bid. Failure to substantially complete the Specified Site Use Work within the number of calendar days stated by the Contractor in the bid, including extensions granted in accordance with paragraph 5 above, will result in the Daily Road User Cost of $4500 being assessed for every calendar day in excess of the stated number, up to the time in which the Specified Site Use Work is substantially complete.

This assessment will be deducted from any compensation due the Contractor or recovered if sufficient compensation is not due.

The Engineer will be the sole authority in determining when the Specified Site Use Work is substantially complete.

8. Contract Time and Liquidated Damages. Determination of calendar days charged, extensions of Contract Time, and assessment of liquidated damages for failure to complete all work within the Contract Time limit will be made in accordance with the Standard Specifications Section 108. Liquidated Damages under Section 108 of the Standard Specifications are ***separate and in addition*** to the Daily Road User Cost assessed under this Special Provision.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB 080457
INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)

GENERAL

The requirements of this Special Provision are intended to apply to construction activities on the Union Pacific Railroad Company right-of-way on 2 Crossover Rd. (440686C, Van Buren Sub, Railroad Mile Post 366.63) in Mayflower, Faulkner County Arkansas. These requirements are in addition to construction details on the plans or called for elsewhere in the Specifications.

The Railroad Company's authorized representative Shaneice K. Byrom, Manager of Track Maintenance (McGehee Sub) 1600 Mississippi, Monroe, LA 71202, 402-321-1318.

INSURANCE

For Insurance requirements, contract Mr. Rooke Jackson, Public Project Representative, 5233 Cockrell Ave., Fort Worth, TX 76133, (682) 274-3898, rjackson@benesch.com.

CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

A Contractor's Right of Entry Agreement (CREA) must be completed and filed with the Railroad for this project. For information regarding the CREA contact Mr. Rooke Jackson, Public Project Representative, 5233 Cockrell Ave., Fort Worth, TX 76133, (682) 274-3898, rjackson@benesch.com.

CONSTRUCTION

The Contractor shall give at least 30 day's advance notice to the Railroad Company's authorized representative before starting any work whatsoever in the vicinity of the tracks. The Contractor shall reimburse the Railroad Company for any expense to the Company for all flagmen or other protective services or devices deemed necessary by the Railroad Company management during the performance of the work.

Fiber optic cable systems may be buried on the Railroad's property. The Contractor shall telephone the Arkansas One Call Center (800) 482-8998 to determine if fiber optic cable is buried anywhere on the Railroad's right-of-way within the project limits. If it is, the Contractor shall telephone the telecommunication company(ies) involved, arrange for a cable locator, and make arrangements for protection of the fiber optic cable prior to beginning any work on the Railroad's right-of-way.

The Contractor shall protect and hold harmless the Railroad and any other railroad company occupying or using the Railroad's right-of-way or line of the Railroad against all loss, liability and damage arising from activities of the Contractor, it's forces or any of its subcontractors or agents.

Upon completion of work, the Contractor shall remove from the Railroad's premises all equipment, surplus material and debris, leaving the premises in a neat condition satisfactory to Railroad's superintendent.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB 080457
INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)

FLAGGING
Costs for flagging will be paid directly to the Railroad by the Contractor. Contact Mr. Rooke Jackson for more information.

PAYMENT
The costs incident to this Special Provision shall not constitute a separate pay item under this contract or be paid for directly but shall be considered to be subsidiary work pertaining to the various items of the contract.

RAIL TRAFFIC
The railroad estimates 11 trains traveling 10 mph over this crossing on a daily basis.

FALSE DECKING
If Contractor was planning to install false decking, including temporary false decking structures underneath the bridge, it is the Contractor's responsibility to provide to the plan to UPRR via Benesch Consultant noted above.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB 080457
INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)

UNION PACIFIC RAILROAD
CONTRACTORS RIGHT OF ENTRY AGREEMENT INSTRUCTIONS

Before Union Pacific Railroad Company can permit you to perform work on its property for the Purpose, it will be necessary for you to complete and execute two originals of the enclosed Contractor's Right of Entry Agreement. For further instructions, contact Mr. Rooke Jackson at the contact information above.

Please include a check made payable to the Union Pacific Railroad Company in the amount of $1,025.00 for the non-refundable fee. If you require formal billing, you may consider this letter as a formal bill. In compliance with the Internal Revenue Services' new policy regarding their Form 1099, I certify that 94-6001323 is the Railroad Company's correct Federal Taxpayer Identification Number and that Union Pacific Railroad Company is doing business as a corporation.

The Contractor is required to procure Railroad Protective Liability Insurance (RPLI) for the duration of this project. Railroad Protective Liability Insurance (RPLI) may be obtained from any insurance company which offers such coverage. Union Pacific has also worked with a national broker, Marsh USA, to make available RPLI to you or your contractor. You can find additional information, premium quotes, and application forms at: www.uprr.marsh.com.

This agreement will not be accepted by the Railroad Company until you have returned all of the following to the undersigned at Union Pacific Railroad Company:

1. Executed, unaltered duplicate original counterparts of the Contractor's Right of Entry Agreement;
2. Your check in the amount of $1,025.00 to pay the non-refundable fee. (The Folder Number should be written on the check to insure proper credit). If you require formal billing, you may consider this letter as a formal bill;
3. Copies of all of your up-to-date General Liability, Auto Liability & Workman's Compensation Insurance Certificates (yours and all contractors'), naming Union Pacific Railroad Company as additional insured;
4. Copy of your up-to-date Railroad Protective Liability Insurance Certificate (yours and all contractors'), naming Union Pacific Railroad Company as the primary insured.

RETURN ALL OF THESE REQUIRED ITEMS TOGETHER IN ONE ENVELOPE.
DO NOT MAIL ANY ITEM SEPARATELY.

PUBLIC PROJECT
PRE-CONSTRUCTION INFORMATION
080457 UPRR Overpass & Realign. (Mayflower)

Contractor is responsible to ensure their subcontractors comply with all UPRR requirements.

REQUIREMENTS FOR WORKING ON UPRR PROPERTY:

Work may not begin on UPRR property, nor adjacent to UPRR property if it has the potential to impact UPRR operations, until the following items are submitted and accepted* by UPRR.

1. Executed C&M agreement.
2. Executed Right-of-Entry.
3. Required insurance certificates.
4. Safety Action Plan (post at job site).
5. Project schedule.
6. Temporary Construction Crossing agreement (with insurance and payment), handled by Benesch PM and UPRR Real Estate. (If Applicable)
7. Applicable list of design and construction submittals approved by UPRR PE.
8. Successful completion of Union Pacific Property Access Training (UP-PAT) available at the link below:
   https://www.up.com/aboutup/community/safety/erailsafe/up-pat/index.htm

PROJECT SAFETY:

1. Work within 25 feet of a live track(s) will require some form of track protection. This includes the use of equipment outside 25 feet of a track that has the potential to foul the track(s). A common form of protection is a Form B Track Bulletin for track protection. The Form B requires approaching trains to notify flagmen in advance of reaching the work limits. If the workforce is large or contains several teams performing different tasks, sub-group coordinators will be assigned. The flagmen will notify sub-group coordinators of an approaching train. The sub-group coordinators must clear the track of all workers and equipment for which they are responsible before the train is allowed to proceed. Contractor may not return to work until notified by flagger it is safe to do so. The UPRR or 3rd party flagman and/or Manager of Track Maintenance is the final authority on any issue pertaining to working around tracks.

2. The Form B will have an agreed-upon start and stop time and milepost limits for each day. A safety meeting will be conducted each morning where the Form B will be distributed and discussed. Everyone must have the track protection information each day. Contractor must have all workers and equipment clear of the track before Form B expires at the end of each day. UPRR will permit the Contractor to leave equipment and material within the right-of-way provided it is greater than 25 feet from the centerline of tracks. All equipment left on UPRR property must have a lockable battery disconnect.

3. Personal Protective Equipment
    a. Minimum includes a hard hat, safety glasses with side shields, **orange** reflective vest, (ANSI II) lace-up safety toed boots with a definable heel, and work gloves.
    b. All job-specific safety equipment required for best practice of work task. (hot work, fall protection, confined space, etc.)
    c. The only exception is vendors/delivery drivers who will stay in the truck or in designated safety zone acceptable to UPRR.

4. Job Safety Briefings
    a. Interactive daily job safety briefings are the responsibility of Contractor and must be held each morning before beginning work. The UPRR/3rd party flagman must be present and participate. Task-specific job safety briefings must be held and repeated as tasks or conditions change.
    b. Contractor must record job safety briefing content, date, and all attending employees must sign stating their attendance and understanding. Non-English speaking workgroups must have a bi-lingual person present at all times for translation.
    c. Headlights on at all times while on the project. Do not use flashers.
    d. Contractor to provide radios to all workgroups, the flagman, and Benesch PM if requested.
    e. Subcontractors must be included.

5. Emergency Response Plan
    a. Include project personnel contact information
    b. It will also include fire, medical and police contact information, directions to the site and directions to the nearest emergency facilities.
    c. A laminated copy must be located in all vehicles/equipment on-site and job trailers.

6. The mainline track speed through the project limits is to be discussed with Rooke Jackson.

7. Temporary UPRR clearances for the track must be strictly adhered to – vertical 21 feet-6 inches, top-of-rail to structure, horizontal 15 feet from the centerline of the track to nearest obstruction. Refer to the final drawings that have been accepted* by UPRR.
8. Housekeeping around the tracks and on UPRR right-of-way is a priority and shall comply with UPRR instructions. Walkway paths and within 15 feet from the centerline of tracks shall be free of debris and other walking hazards at all times. All slip/trip/fall hazards and temporary excavation must be protected at all times. This should include temporary scaffolding, shoring, platforms, etc.
9. Safety assessments will be performed to monitor contractor compliance.
10. All injuries and incidents regardless of severity must be communicated to Benesch PM and UPRR **immediately!** Reporting will be required by the contractor for any event on UPRR property and it must be completed within 24 hours of occurrence.
11. All spills, of any size, on UPRR property, must be reported to UPRR or Benesch PM immediately.

OPERATIONALLY CRITICAL WORK AND SUBMITTALS: (4 to 6 weeks review timeline) Work that requires a submittal and impacts, or could impact UPRR operations, on UPRR right-of-way or adjacent to it, is designated as Operationally Critical (OC) work.

1. Operationally Critical (OC) submittals are those that have the potential to affect the safe operation of trains and will need to be reviewed carefully. Work must be monitored to ensure it conforms to the submitted/accepted* plan.
2. In-person safety review meetings will be required with UPRR representative, Benesch PM, Contractor, and Agency representative for all on-track work and must be documented. When an OC window is required the meeting shall occur at least 48 hours in advance of work starting.
    a. UP Railroad - BNSF Railway Guidelines for Railroad Grade Separation Projects specifies the required submittals.
    b. OC Submittals included in the above are:
        i. Shoring
        ii. Falsework
        iii. Demolition (substructure and superstructure)
        iv. Erection (overhead and underpass structures)
        v. Construction Phasing Plans
    c. Additional submittals required, but not included in the Guidelines are:
        i. All work plans that remove tracks from service (track outage windows require a detailed Gantt chart when greater than 2 hours)
        ii. Contingency plans (only Underpass Structures)
        iii. Additional submittals may be required on a project by project basis.

Required Submittals:

1. Demolition – **Required**
2. Shoring - **Required**
3. Containment/Erosion Control - **Required**
4. Falsework – **Required**
5. Erection – **Required**

Flagging Requirements:

No UPRR Cost/Benefits Project?	Correct
UPRR flaggers required?	Yes
DTM Approval?	TBD

PROJECT COORDINATION:

Railroad Contacts:

Railroad Emergency Number (RMCC)	**1-888-877-7267**
Primary UPRR point of contact	Rooke Jackson, Benesch PM – Industry & Public Projects (682) 274-3898 rjackson@benesch.com Jason Taylor, Benesch Manager of Construction/Inspection (254) 652-0774 jtaylor@benesch.com
UPRR flagging services and Track Work	Shaneice Byrom, Manager Track Maintenance (MTM) 402-321-1318
UPRR signal wireline identification/location	Donnie Burrow, Manager Signal Maintenance (MSM) (870) 926-5085 dgburrow@up.com
Railroad's Fiber Optic Hotline	**1-800-336-9193**

1. All soils imported to or removed from UPRR right-of-way must be tested for contaminates per UPRR requirements. Arrangement for testing and, if removing soil from UPRR, acceptance of the disposal site must be made well in advance – **60 days** is recommended to reduce the risk of delay. Removal/Placement of Soil agreement may be required.
2. Drainage shall not be altered or otherwise impacted without UPRR PE acceptance*. Adequate positive drainage must be provided at all times adjacent to UPRR tracks and as required by UPRR PE.
3. Stormwater and regulatory compliance must be implemented per project specifications and permitting, and exceptions observed will be communicated by the Contractor.
4. Access used by UPRR, either public or private shall not be impacted or altered without UPRR PE acceptance*.
5. Review UPRR's 4th quarter moratorium on track windows.
6. Establish communication protocol between UPRR PE, Benesch PM, Flagman, Contractor, and Agency. The primary contacts should be the Agency and Benesch PM.
7. Review project schedule – it must be continuously updated for flagging and track outage window planning.
8. Schedule for weekly meetings and conference call information.
9. Flagging, scheduled track outage windows and any changes with them require advance planning – plan accordingly. Track window requests must be minimized in duration and frequency, are never guaranteed and must be acceptable by UPRR. For track window requests:
    a. ≥6 hours for scheduled "absolute" windows, 60-day lead-time.
    b. <6 hours for scheduled "absolute" windows, 14-day lead-time.
    c. <2 hours, work with flagman and dispatcher, lead-time may not be necessary.
    d. Gantt Charts shall be prepared, reviewed and accepted* by UPRR PE one week prior to all scheduled windows greater than 2 hours.
    e. All submittals shall conform to acceptable work window durations.

ADDITIONAL ITEMS

Contact Rooke Jackson to discuss the submittal process work from the State's side.

[redacted]

UPRR Audit No.:

CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

THIS AGREEMENT is made and entered into as of the _____ day of _____, 20__, by and between **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation ("Railroad"); and

_____ (*Name of Contractor*)

a _____ corporation ("Contractor").

RECITALS:

Contractor has been hired by the State of Arkansas Highway and Transportation Department ("State") to complete subject job. The Railroad is willing to permit the Contractor to perform the work described above at the location described above subject to the terms and conditions contained in this Agreement

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between Railroad and Contractor, as follows:

ARTICLE 1 - DEFINITION OF CONTRACTOR.

For purposes of this Agreement, all references in this agreement to Contractor shall include Contractor's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority.

ARTICLE 2 - RIGHT GRANTED; PURPOSE.

Railroad hereby grants to Contractor the right, during the term hereinafter stated and upon and subject to each and all of the terms, provisions and conditions herein contained, to enter upon and have ingress to and egress from the property described in the Recitals for the purpose of performing the work described in the Recitals above. The right herein granted to Contractor is limited to those portions of Railroad's property specifically described herein, or as designated by the Railroad Representative named in Article 4.

ARTICLE 3 - TERMS AND CONDITIONS CONTAINED IN EXHIBITS B, C & D.

The General Terms and Conditions contained in **Exhibit B**, the Insurance Requirements contained in **Exhibit C**, and the Minimum Safety Requirements contained in **Exhibit D**, each attached hereto, are hereby made a part of this Agreement.

ARTICLE 4 - ALL EXPENSES TO BE BORNE BY CONTRACTOR; RAILROAD REPRESENTATIVE.

A. Contractor shall bear any and all costs and expenses associated with any work performed by Contractor, or any costs or expenses incurred by Railroad relating to this Agreement.

B. Contractor shall coordinate all of its work with the following Railroad representative or his or her duly authorized representative (the "Railroad Representative") Noted Above.

[redacted]

C. Contractor, at its own expense, shall adequately police and supervise all work to be performed by Contractor and shall ensure that such work is performed in a safe manner as set forth in Section 7 of **Exhibit B**. The responsibility of Contractor for safe conduct and adequate policing and supervision of Contractor's work shall not be lessened or otherwise affected by Railroad's approval of plans and specifications involving the work, or by Railroad's collaboration in performance of any work, or by the presence at the work site of a Railroad Representative, or by compliance by Contractor with any requests or recommendations made by Railroad Representative.

ARTICLE 5 - SCHEDULE OF WORK ON A MONTHLY BASIS.

The Contractor, at its expense, shall provide on a monthly basis a detailed schedule of work to the Railroad Representative named in Article 4B above. The reports shall start at the execution of this Agreement and continue until this Agreement is terminated as provided in this Agreement or until the Contractor has completed all work on Railroad's property.

ARTICLE 6 - TERM; TERMINATION.

A. The grant of right herein made to Contractor shall commence on the date of this Agreement, and continue until _____, unless sooner terminated as herein
(Expiration Date)

provided, or at such time as Contractor has completed its work on Railroad's property, whichever is earlier. Contractor agrees to notify the Railroad Representative in writing when it has completed its work on Railroad's property.

B. This Agreement may be terminated by either party on ten (10) days written notice to the other party.

ARTICLE 7 - CERTIFICATE OF INSURANCE.

A. Before commencing any work, Contractor will provide Railroad with the (i) insurance binders, policies, certificates and endorsements set forth in **Exhibit C** of this Agreement, and (ii) the insurance endorsements obtained by each subcontractor as required under Section 12 of **Exhibit B** of this Agreement.

B. All insurance correspondence, binders, policies, certificates and endorsements shall be sent to:

Union Pacific Railroad Company
Real Estate Department
1400 Douglas Street, MS 1690
Omaha, NE 68179-1690
[redacted]

ARTICLE 8 - DISMISSAL OF CONTRACTOR'S EMPLOYEE.

At the request of Railroad, Contractor shall remove from Railroad's property any employee of Contractor who fails to conform to the instructions of the Railroad Representative in connection with the work on Railroad's property, and any right of Contractor shall be suspended until such removal has occurred. Contractor shall indemnify Railroad against any claims arising from the removal of any such employee from Railroad's property.

ARTICLE 9 - CROSSINGS.

No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

ARTICLE 10 - CROSSINGS; COMPLIANCE WITH MUTCD AND FRA GUIDELINES.

A. No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

B. Any permanent or temporary changes, including temporary traffic control, to crossings must conform to the Manual of Uniform Traffic Control Devices (MUTCD) and any applicable Federal Railroad Administration rules, regulations and guidelines, and must be reviewed by the Railroad prior to any changes being implemented. In the event the Railroad is found to be out of compliance with federal safety regulations due to the Contractor's modifications, negligence, or any other reason arising from the Contractor's presence on the Railroad's property, the Contractor agrees to assume liability for any civil penalties imposed upon the Railroad for such

noncompliance.

ARTICLE 11 - EXPLOSIVES.

Explosives or other highly flammable substances shall not be stored or used on Railroad's property without the prior written approval of Railroad.

IN WITNESS WHEREOF, the parties hereto have duly executed this agreement in duplicate as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY
(Federal Tax ID #94-6001323)

By:_____
[redacted]
Senior Manager-Real Estate

_____
(Name of Contractor)

By_____

Printed Name:_____

Title:_____

EXHIBIT B

TO CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

GENERAL TERMS & CONDITIONS

Section 1. NOTICE OF COMMENCEMENT OF WORK - FLAGGING.

A. Contractor agrees to notify the Railroad Representative at least thirty (30) working days in advance of Contractor commencing its work and at least ten (10) working days in advance of proposed performance of any work by Contractor in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Railroad's track(s) at any time, for any reason, unless and until a Railroad flagman is provided to watch for trains. Upon receipt of such ten (10)-day notice, the Railroad Representative will determine and inform Contractor whether a flagman need be present and whether Contractor needs to implement any special protective or safety measures. If flagging or other special protective or safety measures are performed by Railroad, Railroad will bill Contractor for such expenses incurred by Railroad, unless Railroad and a federal, state or local governmental entity have agreed that Railroad is to bill such expenses to the federal, state or local governmental entity. If Railroad will be sending the bills to Contractor, Contractor shall pay such bills within thirty (30) days of Contractor's receipt of billing. If Railroad performs any flagging, or other special protective or safety measures are performed by Railroad, Contractor agrees that Contractor is not relieved of any of its responsibilities or liabilities set forth in this Agreement.

B. The rate of pay per hour for each flagman will be the prevailing hourly rate in effect for an eight-hour day for the class of flagmen used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect at the time the work is performed. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays, and two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between Railroad and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized governmental agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, Contractor (or the governmental entity, as applicable) shall pay on the basis of the new rates and charges.

C. Reimbursement to Railroad will be required covering the full eight-hour day during which any flagman is furnished, unless the flagman can be assigned to other Railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other Railroad work. Reimbursement will also be required for any day not actually worked by the flagman following the flagman's assignment to work on the project for which Railroad is required to pay the flagman and which could not reasonably be avoided by Railroad by assignment of such flagman to other work , even though Contractor may not be working during such time. When it becomes necessary for Railroad to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, Contractor must provide Railroad a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5) days notice of cessation is not given, Contractor will still be required to pay flagging charges for the five (5) day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional ten (10) days notice must then be given to Railroad if flagging services are needed again after such five day cessation notice has been given to Railroad.

Section 2. LIMITATION AND SUBORDINATION OF RIGHTS GRANTED

A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Railroad to use and maintain its entire property including the right and power of Railroad to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, roadways, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by Railroad without liability to Contractor or to any other party for compensation or damages.

B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of Railroad's property, and others) and the right of Railroad to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 3. NO INTERFERENCE WITH OPERATIONS OF RAILROAD AND ITS TENANTS.

A. Contractor shall conduct its operations so as not to interfere with the continuous and uninterrupted use and operation of the railroad tracks and property of Railroad, including without limitation, the operations of Railroad's lessees, licensees or others, unless specifically authorized in advance by the Railroad Representative. Nothing shall be done or permitted to be done by Contractor at any time that would in any manner impair the safety of such operations. When not in use, Contractor's machinery and materials shall be kept at least fifty (50) feet from the centerline of Railroad's nearest track, and there shall be no vehicular crossings of Railroads tracks except at existing open public crossings.

B. Operations of Railroad and work performed by Railroad personnel and delays in the work to be performed by Contractor caused by such railroad operations and work are expected by Contractor, and Contractor agrees that Railroad shall have no liability to Contractor, or any other person or entity for any such delays. The Contractor shall coordinate its activities with those of Railroad and third parties so as to avoid interference with railroad operations. The safe operation of Railroad train movements and other activities by Railroad takes precedence over any work to be performed by Contractor.

Section 4. LIENS.

Contractor shall pay in full all persons who perform labor or provide materials for the work to be performed by Contractor. Contractor shall not create, permit or suffer any mechanic's or materialmen's liens of any kind or nature to be created or enforced against any property of Railroad for any such work performed. Contractor shall indemnify and hold harmless Railroad from and against any and all liens, claims, demands, costs or expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished. If Contractor fails to promptly cause any lien to be released of record, Railroad may, at its election, discharge the lien or claim of lien at Contractor's expense.

Section 5. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

A. Fiber optic cable systems may be buried on Railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Contractor shall telephone Railroad during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on Railroad's property to be used by Contractor. If it is, Contractor will telephone the telecommunications company(ies) involved, make arrangements for a cable locator and, if applicable, for relocation or other protection of the fiber optic cable. Contractor shall not commence any work until all such protection or relocation (if applicable) has been accomplished.

B. In addition to other indemnity provisions in this Agreement, Contractor shall indemnify, defend and hold Railroad harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of any act or omission of Contractor, its agents and/or employees, that causes or contributes to (1) any damage to or destruction of any telecommunications system on Railroad's property, and/or (2) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents and/or employees, on Railroad's property. Contractor shall not have or seek recourse against Railroad for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Railroad's property or a customer or user of services of the fiber optic cable on Railroad's property.

Section 6. PERMITS - COMPLIANCE WITH LAWS.

In the prosecution of the work covered by this Agreement, Contractor shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 7. SAFETY.

A. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by Contractor. Contractor shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. Contractor shall at a minimum comply with Railroad's safety standards listed in

Exhibit D, hereto attached, to ensure uniformity with the safety standards followed by Railroad's own forces. As a part of Contractor's safety responsibilities, Contractor shall notify Railroad if Contractor determines that any of Railroad's safety standards are contrary to good safety practices. Contractor shall furnish copies of **Exhibit D** to each of its employees before they enter the job site.

B. Without limitation of the provisions of paragraph A above, Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately trained in all safety and health aspects of the job.

C. Contractor shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. Contractor shall promptly notify Railroad of any U.S. Occupational Safety and Health Administration reportable injuries. Contractor shall have a nondelegable duty to control its employees while they are on the job site or any other property of Railroad, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.

D. If and when requested by Railroad, Contractor shall deliver to Railroad a copy of Contractor's safety plan for conducting the work (the "Safety Plan"). Railroad shall have the right, but not the obligation, to require Contractor to correct any deficiencies in the Safety Plan. The terms of this Agreement shall control if there are any inconsistencies between this Agreement and the Safety Plan.

Section 8. INDEMNITY.

A. To the extent not prohibited by applicable statute, Contractor shall indemnify, defend and hold harmless Railroad, its affiliates, and its and their officers, agents and employees (individually an "Indemnified Party" or collectively "Indemnified Parties") from and against any and all loss, damage, injury, liability, claim, demand, cost or expense (including, without limitation, attorney's, consultant's and expert's fees, and court costs), fine or penalty (collectively, "Loss") incurred by any person (including, without limitation, any Indemnified Party, Contractor, or any employee of Contractor or of any Indemnified Party) arising out of or in any manner connected with (i) any work performed by Contractor, or (ii) any act or omission of Contractor, its officers, agents or employees, or (iii) any breach of this Agreement by Contractor.

B. The right to indemnity under this Section 8 shall accrue upon occurrence of the event giving rise to the Loss, and shall apply regardless of any negligence or strict liability of any Indemnified Party, except where the Loss is caused by the sole active negligence of an Indemnified Party as established by the final judgment of a court of competent jurisdiction. The sole active negligence of any Indemnified Party shall not bar the recovery of any other Indemnified Party.

C. Contractor expressly and specifically assumes potential liability under this Section 8 for claims or actions brought by Contractor's own employees. Contractor waives any immunity it may have under worker's compensation or industrial insurance acts to indemnify the Indemnified Parties under this Section 8. Contractor acknowledges that this waiver was mutually negotiated by the parties hereto.

D. No court or jury findings in any employee's suit pursuant to any worker's compensation act or the Federal Employers' Liability Act against a party to this Agreement may be relied upon or used by Contractor in any attempt to assert liability against any Indemnified Party.

E. The provisions of this Section 8 shall survive the completion of any work performed by Contractor or the termination or expiration of this Agreement. In no event shall this Section 8 or any other provision of this Agreement be deemed to limit any liability Contractor may have to any Indemnified Party by statute or under common law.

Section 9. RESTORATION OF PROPERTY.

In the event Railroad authorizes Contractor to take down any fence of Railroad or in any manner move or disturb any of the other property of Railroad in connection with the work to be performed by Contractor, then in that event Contractor shall, as soon as possible and at Contractor's sole expense, restore such fence and other property to the same condition as the same were in before such fence was taken down or such other property was moved or disturbed. Contractor shall remove all of Contractor's tools, equipment, rubbish and other materials from Railroad's property promptly upon completion of the work, restoring Railroad's property to the same state and condition as when Contractor entered thereon.

Section 10. WAIVER OF DEFAULT.

Waiver by Railroad of any breach or default of any condition, covenant or agreement herein contained to be kept, observed and performed by Contractor shall in no way impair the right of Railroad to avail itself of any remedy for any subsequent breach or default.

Section 11. MODIFICATION - ENTIRE AGREEMENT.

No modification of this Agreement shall be effective unless made in writing and signed by Contractor and Railroad. This Agreement and the exhibits attached hereto and made a part hereof constitute the entire understanding between Contractor and Railroad and cancel and supersede any prior negotiations, understandings or agreements, whether written or oral, with respect to the work to be performed by Contractor.

Section 12. ASSIGNMENT - SUBCONTRACTING.

Contractor shall not assign or subcontract this Agreement, or any interest therein, without the written consent of the Railroad. Contractor shall be responsible for the acts and omissions of all subcontractors. Before Contractor commences any work, the Contractor shall, except to the extent prohibited by law; (1) require each of its subcontractors to include the Contractor as "Additional Insured" in the subcontractor's Commercial General Liability policy and Business Automobile policies with respect to all liabilities arising out of the subcontractor's performance of work on behalf of the Contractor by endorsing these policies with ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage; (2) require each of its subcontractors to endorse their Commercial General Liability Policy with "Contractual Liability Railroads" ISO Form CG 24 17 10 01 (or a substitute form providing equivalent coverage) for the job site; and (3) require each of its subcontractors to endorse their Business Automobile Policy with "Coverage For Certain Operations In Connection With Railroads" ISO Form CA 20 70 10 01 (or a substitute form providing equivalent coverage) for the job site.

EXHIBIT C

TO CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

INSURANCE REQUIREMENTS

Contractor shall, at its sole cost and expense, procure and maintain during the course of the Project and until all Project work on Railroad's property has been completed and the Contractor has removed all equipment and materials from Railroad's property and has cleaned and restored Railroad's property to Railroad's satisfaction, the following insurance coverage:

A. COMMERCIAL GENERAL LIABILITY INSURANCE. Commercial general liability (CGL) with a limit of not less than $1,000,000 each occurrence and an aggregate limit of not less than $2,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, which must be stated on the certificate of insurance:

- Contractual Liability Railroads ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Company Property" as the Designated Job Site.

B. BUSINESS AUTOMOBILE COVERAGE INSURANCE. Business auto coverage written on ISO form CA 00 01 10 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less $5,000,000 for each accident and coverage must include liability arising out of any auto (including owned, hired and non-owned autos).

The policy must contain the following endorsements, which must be stated on the certificate of insurance:

- Coverage For Certain Operations In Connection With Railroads ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Property" as the Designated Job Site.

C. WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE. Coverage must include but not be limited to:

- Contractor's statutory liability under the workers' compensation laws of the state where the work is being performed.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 disease policy limit $500,000 each employee.

If Contractor is self-insured, evidence of state approval and excess workers compensation coverage must be provided.

Coverage must include liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

D. RAILROAD PROTECTIVE LIABILITY INSURANCE. Contractor must maintain Railroad Protective Liability insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad as named insured, with a limit of not less than $2,000,000 per occurrence and an aggregate of $6,000,000. A binder stating the policy is in place must be submitted to Railroad before the work may be commenced and until the original policy is forwarded to Railroad.

E. UMBRELLA OR EXCESS INSURANCE. If Contractor utilizes umbrella or excess policies, these policies must "follow form" and afford no less coverage than the primary policy. Requirements in Section A – C may be satisfied through a combination of primary and excess/umbrella insurance policies.

OTHER REQUIREMENTS

F. All policy(ies) required above (except worker's compensation and employers liability) must include Railroad as "Additional Insured" using ISO Additional Insured Endorsement CG 20 26 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall not be limited by Contractor's liability under the indemnity provisions of this Agreement. BOTH CONTRACTOR AND COMPANY EXPECT THAT UNION PACIFIC RAILROAD COMPANY WILL BE PROVIDED WITH THE BROADEST POSSIBLE COVERAGE AVAILABLE BY OPERATION OF LAW UNDER ISO ADDITIONAL INSURED FORM CG 20 26 (OR SUBSTITUTE FORMS PROVIDING EQUIVALENT COVERAGE).

G. Contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees. This waiver must be stated on the certificate of insurance.

H. Prior to commencing the work, Contractor shall furnish Railroad with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements in this Agreement.

I. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state where the work is being performed.

J. The fact that insurance is obtained by Contractor or by Railroad on behalf of Contractor will not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Contractor or any third party will not be limited by the amount of the required insurance coverage.

EXHIBIT D

TO CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of Contractor as well as all employees of any subcontractor or agent of Contractor.

I. CLOTHING

A. All employees of Contractor will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet.

Specifically, Contractor's employees must wear:

i. Waist-length shirts with sleeves.
ii. Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
iii. Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safety-toed footwear that conforms to the American National Standards Institute (ANSI) and FRA footwear requirements.

B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.

C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

II. PERSONAL PROTECTIVE EQUIPMENT

Contractor shall require its employees to wear personal protective equipment as specified by Railroad rules, regulations, or recommended or requested by the Railroad Representative.

i. Hard hat that meets the American National Standard (ANSI) Z89.1 – latest revision. Hard hats should be affixed with Contractor's company logo or name.
ii. Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, Z87.1 – latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.
iii. Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:

- 100 feet of a locomotive or roadway/work equipment
- 15 feet of power operated tools
- 150 feet of jet blowers or pile drivers
- 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection – plugs and muffs)

iv. Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

III. ON TRACK SAFETY

Contractor is responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection regulations – 49CFR214, Subpart C and Railroad's On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

i. Maintain a distance of twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.

ii. Wear an orange, reflectorized workwear approved by the Railroad Representative.
iii. Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Contractor must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track. Contractor will also receive special instructions relating to the work zone around machines and minimum distances between machines while working or traveling.

IV. EQUIPMENT

A. It is the responsibility of Contractor to ensure that all equipment is in a safe condition to operate. If, in the opinion of the Railroad Representative, any of Contractor's equipment is unsafe for use, Contractor shall remove such equipment from Railroad's property. In addition, Contractor must ensure that the operators of all equipment are properly trained and competent in the safe operation of the equipment. In addition, operators must be:

i. Familiar and comply with Railroad's rules on lockout/tagout of equipment.
ii. Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
iii. Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other railbound equipment.

B. All self-propelled equipment must be equipped with a first-aid kit, fire extinguisher, and audible back-up warning device.

C. Unless otherwise authorized by the Railroad Representative, all equipment must be parked a minimum of twenty-five (25) feet from any track. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.

D. Cranes must be equipped with three orange cones that will be used to mark the working area of the crane and the minimum clearances to overhead powerlines.

V. GENERAL SAFETY REQUIREMENTS

A. Contractor shall ensure that all waste is properly disposed of in accordance with applicable federal and state regulations.

B. Contractor shall ensure that all employees participate in and comply with a job briefing conducted by the Railroad Representative, if applicable. During this briefing, the Railroad Representative will specify safe work procedures, (including On-Track Safety) and the potential hazards of the job. If any employee has any questions or concerns about the work, the employee must voice them during the job briefing. Additional job briefings will be conducted during the work as conditions, work procedures, or personnel change.

C. All track work performed by Contractor meets the minimum safety requirements established by the Federal Railroad Administration's Track Safety Standards 49CFR213.

D. All employees comply with the following safety procedures when working around any railroad track:

i. Always be on the alert for moving equipment. Employees must always expect movement on any track, at any time, in either direction.
ii. Do not step or walk on the top of the rail, frog, switches, guard rails, or other track components.
iii. In passing around the ends of standing cars, engines, roadway machines or work equipment, leave at least 20 feet between yourself and the end of the equipment. Do not go between pieces of equipment of the opening is less than one car length (50 feet).
iv. Avoid walking or standing on a track unless so authorized by the employee in charge.
v. Before stepping over or crossing tracks, look in both directions first.
vi. Do not sit on, lie under, or cross between cars except as required in the performance of your duties and only when track and equipment have been protected against movement.

E. All employees must comply with all federal and state regulations concerning workplace safety.

BUILDING AMERICA®

7/25/2016

VIA Electronic Mail

Ms. Jessie Jones
Arkansas State Highway and Transportation Department
PO Box 2261
Little Roc, AR 72203-2261

Re: Buy America Compliance

Dear Ms Jones:

This letter is to confirm Union Pacific's procedure with respect to Buy America compliance on projects involving FHWA funds.

All portions of these projects whether performed by the State or Union Pacific shall be performed in compliance with 23 CFR 635.410 and 23 USC 313 as amended by Section 1518 of P.L. 112-141 Buy America Requirements.

Union Pacific shall maintain documentation/certification of all products of iron, steel, or a coating of steel that are incorporated into the project for a period of three years after completion of all obligations under this Agreement.

Within a reasonable time after State's written request, Company shall make such records available for State's audit during Company's regular business hours in Company's headquarters office located in Omaha, Nebraska.

The foregoing procedure is effective immediately and will apply to all FHWA-funded projects.

Sincerely,

Clay McManaman – Manager Special Projects

Acknowledged by: Division Engineer

By: _____

Name: Jessie Jones

Title: Division Engineer – Transportation Planning and Policy

Date: 7/28/2016

UNION PACIFIC CORPORATION
1400 Douglas Street, MS 1580
Omaha, Nebraska 68179

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

PARTNERING REQUIREMENTS

Section 104 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added to **subsection 104.01:**

The Department encourages on this project the establishment and use of a voluntary cohesive partnership agreement between the Department and its Prime Contractor and subcontractors. Toward this end, a partnership may be structured between these parties to draw on the strengths of each to identify and achieve their mutual goals. The objectives of this are:

- Effective contract performance,
- Efficient contract performance,
- Completion of the project within budget,
- Completion of the project on schedule, and
- Construction of the project in accordance with the contract.

This partnership will be shared equally between the Department and the Prime contractor and subcontractors. Participation in this "partnering" concept is voluntary on this project. The Prime Contractor and approved subcontractors shall bear the costs associated with their personnel's time while participating in seminars, workshops, and meetings for successful "partnering" on this project.

In order to obtain a successful partnering relationship and agreement, the Department shall arrange for a partnership development/team building workshop prior to the preconstruction conference. Persons required to attend this workshop are:

- Contractor and approved Subcontractor President, Vice President, or General Superintendent,
- Contractor and approved Subcontractor project Superintendent,
- Department District Engineer,
- Department Resident Engineer,
- Appropriate Department Design personnel,
- Department Staff Construction Engineer, and
- Department Area Materials Engineer.

The Federal Highway Administration and other interested parties shall be invited to attend and participate, but their attendance will not be required.

The Department and/or the Contractor may bring other personnel at their option.

Follow-up meetings shall be held periodically throughout the duration of the contract. The establishment of a partnership charter on this project will not change the legal relationship of the Department and the other participating parties to the contract nor relieve either party from any of the terms of the contract.

The partnership agreement shall NOT constitute authority to change the contract, plans, or Specifications.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 080457

CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS

GENERAL: This special provision limits the temporary construction operations in Special Flood Hazard Areas (SFHA) as required by the National Flood Insurance Program (NFIP).

Temporary construction operations include all work and material necessary to access and construct the permanent bridge(s), culvert(s) and roadway embankment within the SFHA. These operations may include work ramps, haul roads, temporary crossings, detour roads, levees, diversion channels, retaining walls, cofferdams, forms, storage of materials, storage of large equipment, and other related work.

This project crosses a regulatory floodway, regulatory floodplain, or SFHA as shown on the community's Flood Insurance Rate Map published by the FEMA. The regulatory floodway, regulatory floodplain, or SFHA limits are shown on the plan and profile drawings.

The project is designed to comply with the NFIP's regulations set forth in Title 44, Chapter 1, Parts 59-77, of the United States Code of Federal Regulations (CFR).

The following special conditions must be complied with:

- Temporary operations are to be used during the low flow season when possible.
- Temporary operations shall be designed and constructed so as not to result in a significant increase in flood elevations within the community during passage of a major flood.
- Temporary operations shall not obstruct a significant portion of an existing or proposed waterway opening.
- All temporary operations shall meet the requirements of the Corps of Engineers' Section 404 Permit issued for this project.
- All temporary fills and temporary obstructions to the existing or proposed bridge(s) or box culvert(s) must be removed in their entirety, and the affected areas returned to their preconstruction or designed elevation and condition.
- The contractor is responsible for preventing equipment and materials within the floodplain from becoming buoyant and floating downstream during a significant flood event. In the event this flood starts to occur, the contractor shall remove and/or anchor materials and equipment by means approved by the Engineer at the Preconstruction Conference.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT: All work, including labor, materials, tools, and equipment necessary to complete the requirements of this special provision shall not be paid for directly, but will be considered subsidiary to other items in the contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION

JOB NO. 080457

STORM WATER POLLUTION PREVENTION PLAN

National Pollution Discharge Elimination System
General Permit # ARR150000

Prepared for:

ARKANSAS DEPARTMENT OF TRANSPORTATION

Date: October 5, 2020

GENERAL INFORMATION:

A Storm Water Pollution Prevention Plan (SWPPP) has been developed by the ARDOT for this construction project in accordance with good engineering practice. Various items constitute the SWPPP for the project and should be provided for persons requesting to view the SWPPP, including:

a) *The ARDOT Standard Specifications for Highway Construction, 2014 Edition,* (Standard Specifications). The following sections are in reference to water quality or sediment and erosion control: Sections 107, 110, 620, 621, 622, 623, 624, 626, and other sections pertaining to storm water controls.

b) The Construction Plans contain temporary and permanent erosion controls and permanent storm water management measures.

c) Contract documents provide the Contractor and ARDOT with additional specifications. These may include Supplemental Specifications and Special Provisions. Parts of the SWPPP that may be in the Contract include this Special Provision, *Storm Water Pollution Prevention Plan*.

d) Project records including SWPPP inspection reports, the authorized Site Manager daily work report, and various pay quantity documentation, all of which detail the progression of work on the project, when erosion control measures were taken, when the Contractor was given instructions to install or maintain the erosion and sediment control (E&SC) items, and the timing and details of E&SC installation. The Contractor identification form and the Inspector identification form are included as part of the project records.

e) Construction site posting.
   i. For large construction sites (all sites five acres or above) – The first page of the *e-Portal* ADEQ Notice of Intent (NOI) submission, if ten business days have passed since the NOI was deemed complete, to be replaced by the completed Arkansas Department of Environmental Quality (ADEQ) Authorization Letter to Discharge Storm Water when it is sent by ADEQ.
   ii. For small construction sites under five acres (automatic coverage sites) - the completed ADEQ Notice of Coverage for small sites from the ADEQ website.

PROJECT NAME AND LOCATION:

Job 080457, UPRR Overpass & Realign. (Mayflower) (S)

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STORM WATER POLLUTION PREVENTION PLAN

OPERATOR NAME AND ADDRESS:
Arkansas Department of Transportation

Name of District Engineer Jason Hughey

Address of District Headquarters
372 Aspen Lane Russellville, AR. 72811-0070

P. O. Box 70 Russellville, AR. 72811-0070

Name of Resident Engineer (Contact Person) David Ross

Contact Number (501) 327-4861

A. Site Description

1) Pre-construction Topographic view: Refer to the plan and profile sheets for topographic and waterbody information.

2) Project Description and Intended Use after Notice of Termination (NOT) is filed:
The purpose of this project is to construct a new railroad overpass along with widening of the existing route, construction of a new location route, replacement of existing bridge structure utilizing a temporary detour, and interchange improvements.

3) Sequence of Activities:

The sequence of Major Soil Disturbing Activities is shown below. **Be aware that the sequence below is provided as a general course of action for the progression of construction activities. Actual sequence of construction will be determined by the Contractor's schedule and field conditions.**

a. Clearing and Grubbing/Removal and Disposal of Items/ Construction of detour
b. Construction of Bridge Structures, R.C. Box Culverts, and Roadway
c. Interchange and Roadway Improvements/ Removal of Existing Bridge and Detour
d. Complete Grading and Surfacing of Roadway
e. Final Stabilization

4) Total Acres Available: 154.30 Total Disturbed Area: 68.00

(*Note: Any off-site borrow or waste areas are operated by the Contractor, who is responsible for obtaining any required NPDES permits for the sites. The "total acres available" and "total disturbed areas" shown here do not include areas covered under permits obtained by another operator. The Contractor is also responsible for meeting local regulations regarding these sites, including those of a Qualifying Local Program).

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5) Existing Site Information:

a. Runoff Coefficient Based on attachment C:

Before construction starts, the site has a runoff coefficient of 0.38

After construction is completed, the site will have a runoff coefficient of 0.56

b. Soil Information Sandy — Clayey Materials

B. Responsible Parties-General Contractors, Inspectors, etc:

Refer to Contractor identification form in Section Q and the Inspector identification form in Section R. This information will be completed after the Pre-construction conference.

C. Receiving Waters: (Permit Pg. 3 of Part II)

1) Location of Surface Water on Construction Site:

The following surface waters are located on the construction site. List them by name with Station Numbers.

a. C.L. Site 1 - Sta. 105+00 - Beaverdam Creek

b. _____

c. _____

2) The following bodies of water receive runoff from the construction site:

Name of Operator of Municipal Storm Sewer and/or Receiving Stream: Palarm Creek and Beaverdam Creek

Narrative Description of Nearest Water: Beaverdam Creek and Palarm Creek

Name of Ultimate Receiving Water: Arkansas River

Waterbodies that would require the fifty (50) foot buffer zone are Extraordinary Resource Waters (ERW), Ecologically Sensitive Waterbodies (ESW), Natural and Scenic Waterways (NSW), waterbodies with approved TMDLs, waterbodies on the 303(d) list, and/or other uses at the discretion of the Director of ADEQ.

Above categorized waterbodies, if any on project, list both waterbody and qualifier:
N/A

D. TMDL and 303(d) list can be found at:
(http://www.adeq.state.ar.us/water/planning/integrated/**)**

1) 303(d) Listed Waters - Select the following appropriate statement utilizing information received from the Environmental Division.

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Statement 1:

__X__ Storm water discharges from this site do not enter a waterbody on the list of waters impaired for turbidity or other pollutant which could be impacted by roadway construction on the 303(d) list.

Statement 2:

_____ Storm water discharges from this construction site enter a waterbody on the list of impaired waterbodies (303d list) for turbidity and/or other pollutant. The SWPPP has been developed with BMPs which are designed to minimize the discharge of these pollutants to the maximum extent practicable. Condition of sediment control BMPs will be monitored during regular inspections to ensure this goal is met.

2) TMDL Waters - Select the following appropriate statement utilizing information received from the Environmental Division.

Statement 1:

__X__ Storm water discharges from this site do not enter a waterbody with an approved TMDL for turbidity or other pollutant which could be impacted by roadway construction.

Statement 2:

_____ Storm water discharges from this construction site enter a waterbody with an established TMDL allocation for turbidity and/or other pollutant. A TMDL has been written for the waterbody that is applicable to the construction project. The following information documents the construction projects compliance with the TMDL:

1.) List TMDL assumptions and allocations: _____

_____

2.) List measures taken to ensure that the discharge of pollutants from the site is consistent with the assumptions and allocations of the TMDL. _____

_____

E. Attainment of Water Quality Standards after Authorization: (Permit Pg. 4 of Part II)

BMPs have been selected and will be installed and maintained at the construction site that will minimize the discharge of pollutants as necessary to meet applicable water quality standards.

F. Site Map: See Attachment A for items to be included. All of these items should be marked on the job plans maintained for the SWPPP.

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G. Storm Water Controls

1. Initial Site Stabilization, Erosion, & Sediment Controls: (Permit Pg. 5 of Part II)

Complete descriptions and specifications for control measures may be found in the ARDOT's Standard Specifications for Highway Construction, Supplemental Specifications, Special Provisions, Construction Contract, and Construction Plans. **All controls are designed and installed with the primary goal of retaining sediment on site to the maximum extent practicable**.

Insert a description below of the construction activities that are a part of the initial site disturbance and stabilization, along with the appropriate controls measures and time of installation for that activity. This information should be provided by the Contractor at the Pre-construction meeting.

Be aware that the list is general. Actual timing of erosion control installations will be determined daily based upon the construction activity occurring and actual field conditions.

(Construction Activity/Control/Timing)

1) Clearing and Grubbing/ Removal and Disposal of Items/ Silt Fence
2) Construction of Detour/ Silt Fence/ Ditch checks/ Temporary Seeding
3) Construction of R.C. Box Culvert/ Ditch checks/ Silt Fence
4) Obliteration of Existing Roadway/ Seed bed preparation/ Seeding/ Mulch

2. Stabilization Practices: (Permit Pg. 5 of Part II)

List of Stabilization Practices to be utilized and scheduling of implementation for that practice:

X Dust control - wet down dusty areas as needed/ongoing

X Erosion control matting - _____

_____ Geotextiles - _____

X Limiting disturbed area - will be limited by Engineer as discussed in Subsection 110.05(d) of Standard Specifications/ongoing

X Mulches - _____

_____ Mulch control netting - _____

X Off-site tracking controls (Either stabilized exits and/or wheel washing)*

_____ Preserving existing vegetation - as shown on the job plans/ongoing

X Sod stabilization - On F.E.S. and R.C. Box Headwalls

X Temporary and permanent seeding - will be initiated within 14 days of temporarily ceasing construction activity on a portion of the site or immediately initiated where construction activities have permanently ceased.

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__X__ Natural buffer zone – (Will be established along waterbodies with at least 25 feet for any unnamed streams, creeks, rivers, lakes, or other waterbodies and at least 50 feet for an established TMDL waterbody, streams listed on the 303d list, an ERW, ESW, NSW, and any others at the discretion of the Director of ADEQ.

If encroachment is necessary within these required buffer zones, briefly describe the reason why.)

When encroachment occurs, additional measures will be taken to protect the waterbody, and the contractor will be required to stabilize the disturbed area within the buffer zone within 5 business days of completion of work.

__X__ Slope Tracking - _____

_____ Other - _____

*Stabilized exits will use either suitable sized rock as directed by the Engineer or manufactured devices designed to minimize the amount of soil being tracked off-site.

3. Structural Practices: (Permit Pg. 6 of Part II)

List of Structural Practices to be utilized and scheduling of implementation for that practice:

_____ Sediment basins* (to be utilized whenever 10 or more acres drain from common drainage locations on the site based upon 3600 cubic feet per acre or sized based on the runoff volume of a 10 year, 24 hours storm, unless not attainable. If not attainable, briefly describe reason(s) that a basin was not used) _____

__X__ Curb & gutter - _____

__X__ Ditch checks** - _____

_____ Diversion ditches - _____

_____ Drainage swales - _____

_____ Drop inlet silt fences - _____

__X__ Erosion Control Matting - _____

_____ Gabions - _____

__X__ Inlet & outlet protection - _____

__X__ Silt fences - _____

_____ Slope drains - _____

__X__ Storm sewer - _____

_____ Retaining walls - _____

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_____ Temporary Silt Dikes - _____

_____ Wattles/Sediment Logs - _____

__X__ Filter Socks - _____

_____ Other - _____

*Sediment will be removed from basins when design capacity is reduced by 50%. In addition, when a sediment basin is utilized per permit requirements, the procedures for the removal of a sediment basin can be found in the Standard Specifications Subsection 621.03.
**Hay/Straw bales will not be used in areas of concentrated flow.

H. Other Controls: In addition to erosion control and storm water management, our plan will include measures to properly manage solid wastes, hazardous wastes, dust generation, and all other activities that will generate wastes during the construction phase. (Permit Pg. 7 of Part II)

1) Solid material control, debris, and wastes:

   All solid materials discharged to waters of the United States shall be in accordance with Section 110 of the Standard Specifications, the applicable Section 404 Special Provisions in the Job Contract, the plans, and as authorized by a USA Corps of Engineers Section 404 Permit. Litter and construction debris will be prevented from becoming a pollutant source for storm water discharges. Any debris which inadvertently enters a water of the state will be removed daily.

2) Offsite vehicle tracking:

   Each vehicle exit from the construction site must either be stabilized or use wheel washing to prevent the tracking of material onto the public roadway. (If sediment escapes the construction site through tracking, it will be removed by sweeping frequently enough to minimize off-site impacts to waterbodies.)

3) Temporary sanitary facilities:

   Facilities will be provided and properly maintained by the Contractor in accordance with Subsection 107.06 of the Standard Specifications.

4) Concrete waste area:

   Designated concrete washout waste area(s) will be established and utilized to prevent liquid concrete waste from being discharged to a water of the state.

5) Fuel storage, hazardous materials, and truck washing areas:

   The following is a list of materials which could be potential sources of pollution in storm water runoff: asphalt materials, concrete, cement, concrete wash water, paint, solvents, petroleum products, fertilizers, concrete curing compound, lime, linseed oil, asphalt additives, concrete additives, and sewage. Handling of the above materials or other potential pollutants shall be in accordance with Subsection 110.06, Pollutants, of the Standard Specifications.

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I. Non-Storm Water Discharges: (Permit Pg. 11-12 of Part I)

List of Anticipated Allowable Non-Storm Water Discharges*:

1) Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2
2) Landscape Irrigation
3) Pavement wash waters where spills or leaks of toxic or hazardous material have not occurred (unless all spilled material have been removed) and where detergents or other chemicals are not used.
4) Uncontaminated springs, excavation dewatering, and groundwater (Part I.B.13.C). If dewatering is necessary and turbidity exists, the discharge will be managed with appropriate devices such as a sediment bag or basin prior to discharge.

*Other Allowable Non-Storm Water Discharges are listed in the Permit Part I.B.10, but there is no reasonable anticipation of these discharges at this time.

J. Post-Construction Storm Water Management: (Permit Pg. 7 of Part II)

Permanent Storm Water Management - List of devices to be utilized for storm water infiltration and management:

X	Channel linings	X	Concrete ditch paving
X	Culverts	X	Curb and gutter
	Detention basins	X	Drop inlets
X	Dumped riprap		Floodgates
	Gabions		Grassed swale
X	Inlet & outlet protection	X	Permanent seeding
	Retention pond		Riprap
X	Solid sodding	X	Storm sewer
	Topsoil replacement	X	Underdrains
	Velocity dissipators		Wetland creation
	Other-list		

Velocity dissipation devices:

X	Concrete spillways		Grouted riprap
X	Permanent seeding & mulch	X	Underdrains
X	Solid sodding	X	Concrete ditch paving
X	Dumped riprap		Detention basins
	Velocity dissipators		Wetland infiltration
	Other-list		

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K. State or Local Programs: (Permit Pg. 8 of Part II)

The Arkansas State Highway Commission and the Arkansas Department of Transportation have the exclusive authority over the state highway system (See Ark. Code Ann. § 27-67-101, et al), therefore no local agencies would have authority or jurisdiction over the lands owned, controlled, and maintained by the ARDOT. The ARDOT will make every effort to address any concerns of local entities concerning storm water discharges from the state highway right of way.

This authority does not extend to the Contractor's off-site operations. The Contractor is responsible for complying with all State and Local Programs in accordance with Subsection 107.01 of the Standard Specifications.

L. Inspections: (Permit Pg. 8 of Part II)

Inspections will be conducted by a qualified inspector at the following frequency:

___X___ Every 7 days or

_____ Every 14 Days and within 24 hours after a ¼ inch or greater rainfall event.

A report of the inspection will summarize the scope of the inspection, the name of the inspector, the date of inspection, and any damages observed and repairs made to any control measure. Completed inspection forms will be kept with the SWPPP.

The following are the minimum inspection, maintenance, and reporting practices that will be used to maintain erosion and sediment controls at the construction site:

1. Inspection form (Attachment B).
2. All erosion and sediment control measures will be maintained in good working order. If repair is necessary, it will be completed **within three (3) business days of discovery**.
3. All controls will be inspected to ensure that they meet the manufacturer's specifications.
4. Controls will be replaced or modified if periodic inspections reveal the device is not performing as intended.
5. Approximate times of beginning and duration of storm events.
6. Sediment basins and sediment traps will be cleaned out when they reach 50% of the original capacity.
7. A description of any discharges during inspections.
8. Inspections are not required if snow cover exists over the entire site for an extended period of time. If there is any runoff from the site at any time during snow cover, melting conditions would be considered to be existent at the site then inspections would need to be resumed.
9. All site entrances and exits will be checked to ensure no off-site tracking.
10. All components of the SWPPP and inspection reports will be maintained for a minimum of 3 years after permit termination.
11. In addition to inspection, records will be kept of the following:
    a. Dates when major grading activities occur,
    b. Dates when construction activities cease in an area, temporarily or permanently,
    c. Dates when an area is stabilized, temporarily or permanently.

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M. Maintenance: All erosion and sediment control measures will be maintained in good working order. If a repair is necessary, it will be completed **within three (3) business days of discovery**. (Permit Pg. 9 of Part II)

However, if conditions do not permit large equipment to be used, a longer time frame is allowed if the condition is thoroughly documented on the inspection form as stated in the Permit Part II.4.M.

N. Adverse Weather Conditions: Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make inspections impractical, such as extended frozen conditions. When adverse weather conditions prevent the inspection of the site, an inspection should be completed as soon as safe and feasible. If adverse weather conditions prevent compliance with the permit, documentation of the beginning and ending date of adverse weather condition should be included. **This information will be documented in the Site Manager Program job records.**

O. Endangered Species: Endangered species clearance is obtained during the National Environmental Policy Act (NEPA) process for all ARDOT projects and is conducted in accordance with Section 7 of the Endangered Species Act. Further information about this process can be obtained by contacting the ARDOT Environmental Division at (501) 569-2522, or the U.S. Fish and Wildlife Service at (501) 513-4489.

P. Employee Training: ARDOT employees who perform inspections have received formal training in NPDES Storm Water requirements and SWPPP implementation. Training records will be available electronically or will be maintained with the SWPPP after the project commences.

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Q. Contractors: (Permit Pg. 3 of Part II)

All contractors should be identified in the plan. (a page should be included for each subcontractor).

THE CERTIFICATION BELOW SHALL BE COMPLETED AND INCLUDED IN EACH SUBCONTRACT. Copies of these certifications must be inserted at this location.

The Contractor/Subcontractor indicated below shall have responsibility for implementation of the pay items as listed below.

Item	Item

All Contractors operating on the site shall have the responsibility for compliance with Section 110 of the Standard Specifications for their operations, including, but not limited to: Good housekeeping practices, spill prevention, spill reporting and clean-up, and product specific practices such as limiting the discharge of concrete waste water to areas specified in the SWPPP.

Contractor Printed Name: _____

Signature: _____ Title: _____

Company Name: _____ Date: _____

Company Address: _____

Telephone Number: _____ ARDOT Job Number: _____

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R. Inspectors: (Permit Pg. 3 of Part II)

Site inspectors should be identified in the plan.

ARDOT inspectors performing the erosion and sediment control inspection must complete the information below.

Printed Name of ARDOT Inspector	Signature	Contact Number	Date

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S. Plan Certification: (Permit Pg. 9 of Part II) (To be completed by a duly authorized representative or the cognizant official.)

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Note: For this permit only, "this document" refers to the Storm Water Pollution Prevention Plan, "attachments" refers to the site map and inspection forms, and "system" is referencing the project site.

Printed Name: Trinity D. Smith

Printed Title: Engineer of Roadway Design

Signature: Trinity Smith CRM

Date: 10-5-2020

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SPECIAL PROVISION

JOB NO. 080457

SEQUENCE OF CONSTRUCTION

DESCRIPTION: This item shall consist of scheduling of the various construction items to maintain traffic and provide an orderly progression of work.

The general sequence of construction for the various stages of work on this project are shown on the maintenance of traffic plans.

The sequence as shown on the maintenance of traffic plans is a general outline for the construction of this project, and in no way is it intended to cover every item in the project. Items not critical to the construction sequence may be constructed in any stage as approved by the Resident Engineer.

The Contractor may submit for consideration an alternate proposal for sequence of construction. If an alternate sequence of construction is proposed, the Contractor will be required to submit for review and approval a traffic control plan of comparable detail to the traffic control plans included in the job, showing all traffic control items necessary to accomplish the work. If the Contractor's sequence of construction is approved, it shall become the accepted sequence for this project. Any alteration or deviation from the accepted sequence for this project shall have the **written** approval of the Engineer. If the Contractor's sequence of construction necessitates additional traffic control devices or other materials beyond the contract amount, such devices and materials shall be provided, maintained and replaced, if necessary, at no cost to the Department.

There will be no direct payment for fulfilling the requirements of this Special Provision, but compensation will be considered to be included in the price bid for the various contract items.

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VALUE ENGINEERING

Section 104 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added as a new subsection:

104.08 Value Engineering Change Proposals (VECP).

(a) General. The Contractor may submit a Value Engineering Change Proposal at any time after execution of the Contract by the Department. Any VECP submitted before this date shall be deemed to have been submitted on the date the Contract was executed by the Department and the time allowed for consideration of the VECP shall begin on that date. Any cost savings generated to the Contract as a result of a VECP submitted by the Contractor and approved by the Department shall be shared equally between the Contractor and the Department.

The Contractor may submit a VECP for an approved subcontractor. Subcontractors may not submit a VECP except through the Contractor.

Bid prices shall not be based on the anticipated approval of a VECP. If a VECP is rejected, the Contract shall be completed at the Contract bid prices.

If the Department determines that the time for response indicated in the submittal is insufficient for review, the Contractor will be promptly notified. Based on the additional time needed by the Department for review and the effect on the Contractor's schedule occasioned by the added time, the Department will evaluate the need for a time extension.

The Contractor shall have no claim against the Department for any delay to the Contract based on the failure to respond within the time indicated in the submittal if additional information is needed to complete the review.

VECPs contemplated are those that could produce a savings to the Department without impairing essential functions and characteristics of the facility; including but not limited to, service life, economy of operation, ease of maintenance, desired appearance, and safety.

The Contractor may submit for review a “VECP Concept” provided that it contains enough information to clearly define the work involved and the benefits to be realized. Written notification by the Department that the review has been completed and that the “VECP Concept” appears to be favorable merely indicates that the engineering and plan development may continue for submittal of the VE Change Proposal and is not authorization for any construction work to begin. Should the final design not reflect the expected benefits, the Department may reject the “VECP Concept” and the VE Change Proposal without recourse by the Contractor.

(b) Submittal of Proposal. The following materials and information shall be submitted with each proposal:

1. A statement that the proposal is submitted as a VECP.

2. A description of the difference between the existing Contract and the proposed change, and the cooperative advantages and disadvantages of each, including effects on service life, economy of operations, ease of maintenance, desired appearance, and safety.

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3. A complete set of plans and specifications showing the proposed revisions relative to the original Contract features and requirements.

4. A complete analysis indicating the final estimate costs and quantities to be replaced by the Proposal compared to the new costs and quantities generated by the Proposal.

5. A statement specifying the date by which a Change Order adopting the Proposal must be executed to obtain the maximum cost reduction during the remainder of the Contract. This is the review time.

6. A statement detailing the effect the Proposal will have on the Contract time for completing the Contract.

7. A description of any previous use or testing of the Proposal and the conditions and results. If the Proposal was previously submitted on another Department project, indicate the date, Contract number, and the action taken by the Department.

(c) Conditions. VECPs will be considered only when all the following conditions are met:

1. VECPs, approved or not approved by the Department, apply only to the ongoing Contract(s) referenced in the Proposal and become the property of the Department. The Proposal(s) shall contain no restrictions imposed by the Contractor on their use or disclosure. The Department has the right to use, duplicate, and disclose in whole or in part any data necessary for the utilization of the Proposal. The Department retains the right to utilize any accepted Proposal or part thereof on other projects without obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.

2. If the Department is already considering certain revisions to the Contract or has approved certain changes in the Contract for general use that are subsequently incorporated in a VECP, the Department will reject the Proposal and may proceed without obligation to the Contractor.

3. The Contractor shall have no claim against the Department for additional costs or delays resulting from the rejection of a VECP, including but not limited to, “VECP Concept” acceptance, engineering and development costs, loss of anticipated profits, increased material or labor costs.

4. The Department will determine if a Proposal qualifies for consideration and evaluation. It may reject any Proposal that requires excessive time or costs for review, evaluation, and/or investigations, or that is not consistent with the Department's design policies and criteria for the project.

5. The Engineer will reject all or any portion of work performed under an approved VECP if unsatisfactory results are obtained. The Engineer will direct the removal of such rejected work and require construction to proceed under the original Contract requirements without reimbursement for work performed under the proposal, or for its removal. Where modifications to the VECP, other than changes to the estimated quantities, are approved to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the Contract bid prices as if it were

constructed under the original contract requirements. The rejection or limitation of reimbursement shall not constitute the basis of any claim against the Department for delay or for other costs.

6. The proposed work shall not contain experimental features but shall be proven features that have been used under similar or acceptable conditions on other projects or locations acceptable to the Department.

7. Proposals will not be considered if equivalent options are already provided in the Contract.

8. The savings generated by the Proposal must be sufficient to warrant a review and processing.

9. A Proposal changing the type and/or thickness of the pavement structure or revising quantities simply by adjusting grades will not be considered.

10. Additional information needed to evaluate Proposals, shall be provided in a timely manner. Untimely submittals of additional information will result in rejection of the Proposal. Where design changes are proposed, the additional information could include results of field investigations and surveys, design computations, and field change sheets. The review time shall be extended by the number of days between the request by the Department for additional information and the delivery of such additional information.

(d) Payment. If the VECP is accepted, the changes and payment will be authorized by Change Order.

Reimbursement will be made as follows:

1. The changes will be incorporated into the Contract by changes in quantities or unit prices of existing pay items, by the addition of new pay items, or any combination of these methods, as appropriate. Existing pay items are the original Contract pay items and any pay items that have been added to the Contract by Supplemental Agreement on or before the date the VECP is submitted.

2. The cost of the revised work as determined from the changes will be paid as specified in the Change Order. In addition, the Department will pay the Contractor 50 percent of the actual savings to the Department as reflected by the difference between the cost of the revised work and the cost of the related construction required by the original Contract computed at Contract bid prices. This payment will be made upon satisfactory completion of all work under the VECP.

3. Costs for “VECP Concept” acceptance, engineering and development, design, and implementation associated with the VECP are not eligible for reimbursement.

4. Payments as designated above will be made to the Contractor. If the VECP was originated by a subcontractor, the Contractor shall be responsible for any and all payments to the subcontractor arising from the approval of the VECP.

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UTILITY ADJUSTMENTS

Utility facilities at the approximate locations noted in Appendix A will be removed, relocated and/or adjusted in accordance with separate agreements between the Department of Transportation and the respective utility owners.

In accordance with Subsection 105.07, Cooperation with Utilities, of the Standard Specifications, Edition of 2014, the Contractor is forewarned that such work may be underway concurrently with the work under this contract.

1. Owner – AT&T Arkansas
   Contact Scott Kidd, 501-321-3200, 220 Prospect Avenue, Room 400, Hot Springs, AR 71902 .

It is anticipated that AT&T Arkansas will be issued a work order by December 1, 2020 with an estimated completion date of May 31, 2021.

2. Owner – CableSouth Media 3
   Contact Drew Cannon, 731-414-1621, 1056 Jones Blvd, Milan, TN 38358.

It is anticipated that CableSouth Media 3 will be issued a work order by December 1, 2020 with an estimated completion date of March 31, 2021.

3. Owner – CenterPoint Energy
   Contact Geoffrey Ford, 501-377-4549, 401 West Capitol Avenue, Suite 600, Little Rock, AR 72201.

CenterPoint Energy has been issued a work order with an estimated completion date May 31, 2021.

4. Owner – CenturyLink Communications
   Contact Brian McGregor, 417-860-4526, 8110 Cordova Rd., Ste. 101, Cordova, TN 38016.

It is anticipated that CenturyLink Communications will be issued a work order by December 1, 2020 with an estimated completion date of May 31, 2021.

5. Owner – City of Mayflower Water & Sewer
   Contact Raymond Arnold, 501-470-1818, P.O. Box 69, Mayflower, AR 72106.

It is anticipated that the City of Mayflower Water & Sewer will be issued a work order by December 1, 2020 with an estimated completion date of June 29, 2021.

6. Owner – Enable Midstream Partners, LP
   Contact Rick Hardester, 501-377-4614, 5300 Northshore Cove, North Little Rock, AR 72118.

Enable Midstream Partners, LP has been issued a work order with an anticipated completion date of September 30, 2020.

7. Owner – Entergy Arkansas, LLC (Distribution)
   Contact Tammy Carter, 501-379-6861, 900 South Louisiana St., Little Rock, AR 72201.

Entergy Arkansas, LLC (Distribution) has been issued a work order with an estimated completion date of December 31, 2021.

8. Owner – Entergy, Arkansas, LLC (Transmission)
   Contact William Vaughn, 501-490-5645, 5115 Thibault Road, Little Rock, AR 72206.

It is anticipated that Entergy Arkansas, LLC (Transmission) will be issued a work order by December 1, 2020 with an estimated completion date of May 31, 2021.

9. Owner – Permian Express Partners
   Contact Paul Patak, 903-291-6920, 1820 Highway 80, Longview, TX 75604.

Permian Express Partners has been issued a work order with an estimated completion date of September 14, 2020.

10. Owner – Sprint Communications
    Contact James Stuart, 918-622-9483, 1616 Maryland Road, Irving, TX 75061.

Sprint Communications has indicated they have no conflicts with our proposed construction.

11. Owner – Windstream Communications
    Contact Bruce Sims, 501-679-6225, 9 Green Valley Dr., Greenbrier, AR.

It is anticipated that Windstream Communications will be issued a work order by December 1, 2020 with an estimated completion date of May 31, 2021.

The utility status were based on information received from the utility companies, and ARDOT right of way being acquired by November 30, 2020, and the most current information available at this time; therefore, the dates are subject to change.

In case there is a delay beyond the information as set forth above, and should such delay necessarily cause a delay in the Contractor's prosecution of the work, an equitable extension of contract time will be granted to the Contractor. No claim for extra compensation will be allowed, however, because of such delay.

An approved Highway-Utility Agreement, a letter of commitment, or other appropriate document evidencing satisfactory arrangements for the orderly removal, relocation, and/or adjustment of separately owned utility facilities located within the limits and interfering with the construction under this contract is on file with the Arkansas Department of Transportation.

The Contractor is required to make every effort to locate buried utilities including, but not limited to, calling Arkansas One Call Center (800) 482-8998.

Approximate Utility Locations

Utility Owner	Facility Type	Location	Station Number	Est. Comp. Date
AT&T Arkansas	Aerial Telecom Cables (080611)	Parallel Left Hwy. 89	101+00 to 109+00	5/31/2021
	Buried Telecom Cables (080611)	Parallel Left Hwy. 89	101+00 to 109+00	
	Buried Telecom Cables (080611)	Parallel Right Hwy. 89	101+00 to 109+00	
	Aerial Telecom Cables (080611)	Crossing Hwy. 89	Throughout	
	Buried Telecom Cables	Parallel Left Hwy. 89	99+46 to 107+00	
	Buried Telecom Cables	Parallel Right Hwy. 89	99+46 to 107+00	
	Buried Telecom Cables	Parallel Right Hwy. 89	80+00 to 83+00	
	Buried Telecom Cables	Parallel Left Snuggs Cir.	10+00 to 14+30	
	Buried Telecom Cables	Parallel Left Snuggs Cir.	60+00 to 62+00	
	Buried Telecom Cables	Parallel Left Shadel Lane	40+00 to 45+00	
	Buried Telecom Cables	Parallel Left Shadel Lane	30+00 to 32+00	
	Buried Telecom Cables	Parallel Left Carroll Rd	1+00 to 7+35	
	Buried Telecom Cables	Parallel Right N. Main St.	132+00 to 141+40	
	Buried Telecom Cables	Parallel Left Hwy. 365	96+00 to 125+00	
	Buried Telecom Cables	Parallel Left Hwy. 365	96+00 to 125+00	
	Buried Telecom Cables	Parallel Right Hwy. 365	96+00 to 125+00	
	Buried Telecom Cables	Parallel Hwy. 89	99+50 to 116+00	
	Buried Telecom Cables	Crossing N. Main St.	141+40	
	Buried Telecom Cables	Crossing Hwy. 365	112+50	
	Buried Telecom Cables	Crossing Hwy. 365	108+05	
	Buried Telecom Cables	Crossing Hwy. 365	103+10	
	Buried Telecom Cables	Crossing Hwy. 365	103+00	
CableSouth Media 3	Three Phase Electric (080611)	Parallel Left Hwy. 89	100+00 to 112+00	3/31/2021
	Single Phase Electric (080611)	Crossing Hwy. 89	102+00	
	Single Phase Electric (080611)	Crossing Hwy. 89	104+10	
	Single Phase Electric (080611)	Crossing Hwy. 89	105+90	
	Single Phase Electric (080611)	Crossing Hwy. 89	109+30	
	Three Phase Electric	Parallel Left Hwy. 89	99+46 to 106+50	
	Single Phase Electric	Crossing Snuggs Cir.	106+50 to 107+25	
	Three Phase Electric	Crossing Hwy. 89	106+50 to 107+60	
	Single Phase Electric	Parallel Right Snuggs Cir.	10+00 to 14+00	
	Single Phase Electric	Parallel Left Hwy. 89	107+00 to 110+25	
	Three Phase Electric	Parallel Right Hwy. 89	80+00 to 83+50	
	Single Phase Electric	Parallel Right Snuggs Cir.	60+00 to 62+07	
	Single Phase Electric	Parallel Right Snuggs Cir.	70++00 to 75+00	
	Double Three Phase Electric	Parallel Right Hwy. 365	96+00 to 125+00	
	Single Phase Electric	Crossings Throughout	96+00 to 125+00	
	Single Phase Electric	Parallel Left Hwy. 89	195+00 to 202+00	
	Service Crossing	Crossing Hwy. 89	193+50 to 195+00	
CenterPoint Energy	3" Gas Main (080611)	Parallel Right Hwy. 89	101+00 to 103+00	5/31/2021
	3" Gas Main (080611)	Parallel Left Hwy. 89	101+60 to 103+10	
	3" Gas Main (080611)	Crossing Hwy. 89	103+00	
	3" Gas Main (080611)	Parallel Right Hwy. 89	103+00 to 109+00	
	Gas Main	Parallel Left Hwy. 89	99+46 to 106+90	
	Gas Main	Parallel Left Shadel Lane	40+00 to 45+60	
	Gas Main	Parallel Left Snuggs Cir.	10+00 to 14+00	
	Gas Main	Parallel Left Main Street	138+00 to 140+00	
	Gas Main	Parallel Left Hwy. 365	196+00 to 105+75	
	Gas Main	Crossing Hwy. 365	105+75	
	Gas Main	Parallel Left Hwy. 365	105+75 to 125+00	

CenturyLink Communications	Buried Fiber Optic Cable	Parallel I-40	7775+00 to 7795+00	5/31/2021
City of Mayflower Water & Sewer	Buried 10" Water Main (080611)	Parallel Right Hwy. 89	101+00 to 109+00	6/29/2021
	Buried Service Lines (080611)	Crossing Hwy. 89	Throughout	
	Buried 10" Water Main	Parallel Right Hyw. 89	98+00 to 106+50	
	Buried 10" Water Main	Crossing Hwy. 89	106+50 to 107+58	
	Buried 6" Water Main	Parallel Right Hwy. 89	80+00 to 83+25	
	Buried 8" Water Main	Parallel Right Hwy. 89	106+50 to 112+00	
	Buried 8" Water Main	Crossing Hwy. 89	112+00	
	Buried 6" Water Main	Parallel Right Hwy. 89	112+00 to 115+75	
	Buried 8" Water Main	Crossing Hwy. 89	131+60	
	Buried 8" Water Main	Parallel Left Snuggs Cir.	60+00 to 62+03	
	Buried 8" Water Main	Parallel Left Snuggs Cir.	70+00 to 72+60	
	Buried 8" Water Main	Crossing Snuggs Cir.	72+60	
	Buried 8" Water Main	Parallel Right Snuggs Cir.	72+00 to 75+00	
	Buried 6" Water Main	Parallel Right Snuggs Cir.	60+00 to 62+03	
	Buried 6" Water Main	Crossing Hwy. 89	131+85	
	Buried 6" Water Main	Parallel Right Snuggs Cir.	70+00 to 72+60	
	Buried 3" Water Main	Parallel Left Snuggs Cir.	72+00 to 75+00	
	Buried 8" Water Main	Crossing Hwy. 89	136+25	
	Buried 8" Water Main	Crossing Hwy. 89	136+45	
	Buried 2" Water Main	Parallel Right Carroll Rd	1+00 to 3+25	
	Buried 8" Water Main	Parallel Left Main Street	132+00 to 141+40	
	Buried 10" Water Main	Parallel Left Main Street	132+00 to 141+40	
	Buried 8" Water Main	Parallel Left Hwy. 365	96+00 to 112+50	
	Buried 8" Water Main	Crossing Hwy. 365	112+50	
	Buried 8" Water Main	Parallel Left Hwy. 365	112+50 to 125+00	
	Sanitary Sewer 2" Force Main	Parallel Left Shadel Lane	40+00 to 45+60	
	Sanitary Sewer 2" Force Main	Parallel Left Shadel Lane	30+00 to 30+80	
	Sanitary Sewer 8" Gravity Sewer	Parallel Right Snuggs Cir.	59+00 to 62+07	
	Sanitary Sewer 8" Gravity Sewer	Parallel Right Snuggs Cir.	70+00 to 71+40	
	Sanitary Sewer 10" Gravity Sewer	Centerline Carroll Rd.	1+00 to 3+00	
	Sanitary Sewer 12" Gravith Sewer	Parallel Left Hwy. 365	96+00 to 105+10	
	Sanitary Sewer 12" Gravith Sewer	Crossing Hwy. 365	105+10	
	Sanitary Sewer 12" Gravith Sewer	Parallel Left Hwy. 365	105+10 to 112+20	
	Sanitary Sewer 12" Gravith Sewer	Crossing Hwy. 365	112+20	
	Sanitary Sewer 12" Gravith Sewer	Behind Valero	-	
	Sanitary Sewer 12" Gravith Sewer	Crossing Hwy. 89	181+30	
	Sanitary Sewer 10" Force Main	Parallel Right Hwy. 365	112+20 to 122+00	
Enable Midstream Partners, LP	Buried 10 Inch Gas Transmission Main	Crossing Hwy. 89	150+50 at 45 Deg Left Forward Skew	9/30/2020
Entergy Arkansas (Distribution)	Three Phase Electric (080611)	Parallel Left Hwy. 89	100+00 to 112+00	12/31/2021
	Single Phase Electric (080611)	Crossing Hwy. 89	102+00	
	Single Phase Electric (080611)	Crossing Hwy. 89	104+10	
	Single Phase Electric (080611)	Crossing Hwy. 89	105+90	
	Single Phase Electric (080611)	Crossing Hwy. 89	109+30	
	Three Phase Electric	Parallel Left Hwy. 89	99+46 to 106+50	
	Single Phase Electric	Crossing Snuggs Cir.	106+50 to 107+25	
	Three Phase Electric	Crossing Hwy. 89	106+50 to 107+60	
	Single Phase Electric	Parallel Right Snuggs Cir.	10+00 to 14+00	
	Single Phase Electric	Parallel Left Hwy. 89	107+00 to 110+25	
	Three Phase Electric	Parallel Right Hwy. 89	80+00 to 83+50	
	UG Three Phase Electric	Parallel Left Shadel Lane	40+00 to 45+60	
	UG Three Phase Electric	Crossing New Hwy. 89	114+85	
	UG Three Phase Electric	Parallel Left Shadel Lane	30+00 to 33+00	

Entergy Arkansas (Distribution)	Single Phase Electric	Parallel Right Snuggs Cir.	60+00 to 62+07	12/31/2021
	Single Phase Electric	Parallel Right Snuggs Cir.	70++00 to 75+00	
	Double Three Phase Electric	Parallel Right Hwy. 365	96+00 to 125+00	
	Single Phase Electric	Crossings Throughout	96+00 to 125+00	
	Single Phase Electric	Parallel Left Hwy. 89	195+00 to 202+00	
	Service Crossing	Crossing Hwy. 89	193+50 to 195+00	
Entergy Arkansas (Transmission)	Aerial Electric Transmission Lines	Crossing Hwy. 89	141+00	5/31/2020
Permian Express Partners	Petroleum Pipeline	Crossing Hwy. 89	Hwy. 89 173+00	9/14/2020
Sprint Communications	Buried Fiber Optic Cable	Parallel Left UPRR	Hwy. 89 178+50	No Conflict
Windstream Communications	Buried Fiber Optic Cable	Parallel I-40	7775+00 to 7795+00	5/31/2021

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LIQUIDATED DAMAGES

As specified in the Contract, liquidated damages for this project will be as shown in the following tables:

WORKING DAY PROJECTS

ORIGINAL CONTRACT AMOUNT		RATE
FROM MORE THAN	TO AND INCLUDING	----------
$ 0	$ 50,000	$ 400
50,000	100,000	700
100,000	500,000	800
500,000	1,000,000	1,100
1,000,000	2,000,000	1,300
2,000,000	5,000,000	1,500
5,000,000	10,000,000	1,900
10,000,000	15,000,000	2,000
15,000,000	20,000,000	2,100
20,000,000	----------	2,500

FIXED DATE PROJECTS

ORIGINAL CONTRACT AMOUNT		RATE
FROM MORE THAN	TO AND INCLUDING	----------
$ 0	$ 50,000	$ 90
50,000	100,000	100
100,000	500,000	200
500,000	1,000,000	250
1,000,000	2,000,000	320
2,000,000	5,000,000	400
5,000,000	10,000,000	600
10,000,000	----------	750

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
CONTRACTOR'S LICENSE

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The third paragraph of **Subsection 102.01, Prequalification of Bidders** is hereby deleted and the following substituted thereof:

> The attention of prospective bidders is directed to Ark. Code Ann. §17-25-101 et seq., Act 150 of the 1965 Acts of Arkansas, being an "Act Regulating the Practice of Contracting in the State of Arkansas", and any subsequent amendments made thereto. When the work offered is financed in whole with State funds and is estimated to cost $50,000 or more, the prospective bidder must show evidence of license with the Contractors Licensing Board for the State of Arkansas before being furnished with a proposal form.

The third paragraph of **Subsection 108.01, Subletting of Contract** is hereby deleted and the following substituted thereof:

> It shall be the responsibility of the Contractor to determine that all parties performing work amounting to $50,000 or more are currently licensed by the Contractors Licensing Board for the State of Arkansas.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
DEPARTMENT NAME CHANGE

All references to the Arkansas State Highway and Transportation Department contained within the Standard Specifications for Highway Construction (Edition of 2014), the Qualified Products List, the Manual of Field Sampling and Testing Procedures, plan sheets, Supplemental Specifications, and all Special Provisions contained in this proposal are hereby deleted and replaced with the title of Arkansas Department of Transportation.

All references to AHTD contained within the Standard Specifications for Highway Construction (Edition of 2014), the Qualified Products List, the Manual of Field Sampling and Testing Procedures, plan sheets, Supplemental Specifications, and all Special Provisions contained in this proposal are hereby deleted and replaced with the abbreviation ARDOT.

All references to the Arkansas State Highway Commission contained within the Standard Specifications for Highway Construction (Edition of 2014), the Qualified Products List, the Manual of Field Sampling and Testing Procedures, the Standard Drawings, plan sheets, Supplemental Specifications, and all Special Provisions contained in this proposal remain in effect.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ISSUANCE OF PROPOSALS

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 102.04(j) is hereby deleted and the following is substituted therefore:

(j) If the prospective bidder is the Contractor on a current Contract with the Commission on which Liquidated Damages are being assessed, and there are no pending time extensions warranted to remove the project from Liquidated Damages.

Subsection 102.04(k) is hereby deleted and the following is substituted therefore:

(k) If the prospective bidder has a current Contract in default.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER

Section 108 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 108.02(b)(2) is hereby deleted and the following is substituted therefore:

(2) The delivery to the Department for execution of the Contract and bonds properly executed on behalf of the Contractor and surety and the minimum 72 hours advance notice as required above shall constitute the Contractor's authority to begin the following items of work:

- Mobilization;
- Preparation of shop drawings and other required submissions;
- Ordering, fabrication, assembly, and/or stockpiling of materials;
- Driving Test Piling; and
- Contract surveying, when Roadway and/or Bridge Construction Control is included in the Contract.
- Erection of advance warning signs.
- Installation of netting on structures to prevent nesting of migratory birds in accordance with applicable Special Provisions (if included in the Contract).
- Set up, installation, and testing of Automated Work Zone Information Systems (if included in the Contract).
- Off-site area approval process per Section 107.10(c).

Such advance work shall be subject to the Contractor's assumption of the risk of cancellation of the award and the following:

- The Contractor shall, on commencing such operations, take all precautions required for public safety and shall observe all the provisions in the Contract;
- In the event of cancellation of the award, the Contractor shall at Contractor expense do such work as necessary to leave the site in a neat condition to the satisfaction of the Engineer;
- In the event of cancellation of the award, all work performed shall be deemed to be at the Contractor's expense; and
- All work done under this subsection in accordance with the Contract before its execution by the Commission will, when the Contract is executed, be considered authorized work and will be paid for as provided in the Contract.

Unless otherwise notified in writing, no time will be assessed for work performed prior to the effective date of a Work Order.

No payments will be made prior to the date established by the Engineer under Subsection 109.07, which date will be after the effective date of a Work Order.

The Contractor shall not be entitled to any additional compensation or an extension of time for any delay, hindrance, or interference caused by or attributable to commencement of work before the effective date of a Work Order.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

PROTECTION OF WATER QUALITY AND WETLANDS

Section 110 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added as the last paragraph of **Subsection 110.04(b):**

> On all projects let to contract after October 1, 2018, the project superintendent or supervisor (as defined in Subsection 105.06) must be certified in National Pollutant Discharge Elimination System (NPDES) through the University of Arkansas' Center for Training Transportation Professionals (CTTP). The project superintendent or supervisor must provide proof of NPDES certification before any earth disturbing activities, including clearing and grubbing, or any installation of erosion control activities are allowed to begin.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

UNCLASSIFIED EXCAVATION

Section 200 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added after the first paragraph of **Subsection 210.08, Excavation Operations:**

When performing excavation to construct cut slopes, the Contractor shall not excavate material below the finished slope grade. If excavation is performed more than 8 inches below the finished cut slope grade, overcut material shall be removed at no cost to the Department and replaced with clean durable stone. The stone source and gradation shall be approved by the engineer before placement. There shall be no payment for this work.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

AGGREGATE BASE COURSE

Section 303 of the Standard Specifications for Highway Construction, Edition 2014, is hereby amended as follows:

The second paragraph of **Subsection 303.02, Materials** is hereby deleted and the following substituted therefor:

> The Contractor shall have the option of using any higher numbered class Aggregate Base Course than that specified, provided that payment will be for the class specified. Acceptance criteria shall be for the class specified. Different classes of Aggregate Base Course shall not be mixed in the same location.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

QUALITY CONTROL AND ACCEPTANCE

Division 300 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first sentence of the third paragraph **Subsection 306.03 Acceptance Testing** is hereby deleted and the following substituted therefor:

> If the material being furnished is crushed stone the Department will furnish the PL, LL, and PI for the material, further tests for PL, LL, and PI are waived.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
TACK COATS

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 401, Prime and Tack Coats and Emulsified Asphalt in Base Course, is hereby modified as follows:

The first sentence of **Subsection 401.03(a)** is hereby deleted and the following substituted therefore:

> The surface to be treated with prime or tack coat shall be cleaned of dust, dirt, and loose or foreign material by sweeping with mechanical brooms immediately preceding the application of the prime or tack coat.

Third sentence of **Subsection 401.03(c)** is hereby deleted and the following is substituted therefore:

> No dilution beyond that which is part of the emulsification process is permitted. The tack coat shall not be diluted, cut, or otherwise thinned after receipt from the manufacturer's facility.

The fifth sentence of **Subsection 401.03(c)** is hereby deleted and the following substituted therefore:

> The rate of application shall be from 0.03 gallon to 0.10 gallon per square yard (0.1 L/sq m to 0.5 L/sq m) of residual asphalt as designated by the Engineer.

Section 410, Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses, is hereby modified as follows:

The sixth paragraph of **Subsection 410.05** is hereby deleted and the following substituted therefore:

> For foreign material, or when the time lapse between courses is more than 8 hours, the earlier course shall be cleaned and given a tack coat before placing the succeeding course. When directed, the tack coat shall be applied and paid for under Section 401. If directed by the Engineer, a tack coat shall be used even though the elapsed time has been less than 8 hours.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 404, QUALITY CONTROL OF ASPHALT MIXTURES, is hereby modified as follows:

The third paragraph **Subsection 404.04** is hereby deleted and the following substituted therefore:

> The accepted mix design shall be field verified by the Contractor at the start of mix production or after an interruption of more than 120 calendar days. The asphalt mixture shall be verified by testing mix that has been produced through the plant using the aggregate proportions shown on the accepted mix design. Production of Department approved mix designs for placement on non-ARDOT projects may be used for mix verification. The Contractor shall notify the Engineer sufficiently in advance for Department personnel to witness all testing of this production and shall provide copies of all test results to the Department.

Section 410, Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses is hereby modified as follows:

The first and second sentence of **Subsection 410.09, Acceptance of the Payment and Adjustments in Payment**, is hereby deleted and the following is substituted therefore:

(a) General. The accepted mix design shall be verified by the Contractor at the start of mix production for that design or after an interruption of more than 120 calendar days. A maximum of 200 tons (200 metric tons) of materials may be placed on the roadway during the verification process.

Section 411, Asphalt Concrete Plant Mix is hereby modified as follows:

The third sentence of Subsection 411.05 (B), Acceptance is hereby amended and the following is substituted therefore:

(b) Acceptance. The accepted mix design shall be field verified by the Contractor at the start of mix production or after an interruption of more than 120 calendar days.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth sentence of Paragraph 1 of **Subsection 404.01(b), Design Requirements,** is hereby deleted and the following substituted therefor:

The optimum asphalt content is the asphalt binder content at 4% Air Voids (AV).

The first bullet of Paragraph 1 is hereby deleted and the following substituted therefor:

- PG 64-22 and PG 70-22 mixes will be designed using 4% air voids;

The second sentence of Paragraph 2 of **Subsection 404.04, Quality Control of Asphalt Mixtures,** is hereby deleted and the following substituted therefor:

Adjustments to the accepted mix design to conform to actual production values without re-design of the mixture shall be based on production of the mixture at a target value of 4.0% Air Voids (AV) in specimens and an asphalt binder content not less than that specified in the accepted mix design.

Table 405-1 of **Subsection 405.03 Materials** is hereby deleted and the following substituted therefor:

Table 405-1
Design Requirements for Asphalt Concrete Hot Mix Base Course
(1-1/2″ [37.5 mm])

	Control Points	
Sieve (mm)	Percent Passing (%)	
2″ (50.0)	100	
1½″ (37.5)	90 - 100	
1″ (25.0)	90 max.	
No. 4 (4.75)	-	
No. 8 (2.36)	15 - 41	
No. 16 (1.18)	-	
No. 30 (0.60)	-	
No. 50 (0.30)	-	
No. 200 (0.075)	0 - 6	
Asphalt Binder Content	Design Value	
% Air Voids	4.0	
% VMA	11.5 – 13.0	
Minimum Water Sensitivity Ratio	80.0	
% Anti-strip	As Required	
Fines to Asphalt Ratio*	0.6 – 1.6	
Wheel Tracking Test	Design Gyration	Maximum Rut
(8000 cycles, 100 psi, 64ºC)	75 & 115	0.315 in. (8.000 mm)
	160	0.197 in. (5.000 mm)
	205	0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 (0.075 mm) sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Table 406-1 of **Subsection 406.04, Construction Requirements and Acceptance,** is hereby deleted and the following substituted therefor:

Table 406-1
Design Requirements for Asphalt Concrete Hot Mix Binder Course
(1″ [25 mm])

Sieve (mm)	Control Points Percent Passing (%)
1½″ (37.5)	100
1″ (25.0)	90 - 100
¾″ (19.0)	90 max.
No. 4 (4.75)	-
No. 8 (2.36)	19 - 45
No. 16 (1.18)	-
No. 30 (0.60)	-
No. 50 (0.30)	-
No. 200 (0.075)	1 - 7

Asphalt Binder Content	Design Value	
% Air Voids	4.0	
% VMA	12.5 – 14.0	
Minimum Water Sensitivity Ratio	80	
% Anti-strip	As Required	
Fines to Asphalt Ratio*	0.6 – 1.6	
Wheel Tracking Test	Design Gyration	Maximum Rut
(8000 cycles, 100 psi, 64ºC)	75 & 115	0.315 in. (8.000 mm)
	160	0.197 in. (5.000 mm)
	205	0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 (0.075 mm) sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Table 407-1 and Table 407-2 of **Subsection 407.04, Construction Requirements and Acceptance,** are hereby deleted and the following substituted therefor:

Table 407-1
Design Requirements for Asphalt Concrete Hot Mix Surface Course
(1/2″ [12.5 mm])

Sieve (mm)	Control Points Percent Passing (%)
¾″ (19.0)	100
½″ (12.5)	90 - 100
3/8″ (9.5)	90 max.
No. 8 (2.36)	28 - 58
No. 16 (1.18)	-
No. 30 (0.60)	-
No. 50 (0.30)	-
No. 200 (0.075)	2 - 10

Asphalt Binder Content	Design Value	
% Air Voids	4.0	
% VMA	14.0 – 16.0	
Minimum Water Sensitivity Ratio	80.0	
% Anti-strip	As Required	
Fines to Asphalt Ratio*	0.6 – 1.6	
Wheel Tracking Test	Design Gyration	Maximum Rut
(8000 cycles, 100 psi, 64ºC)	75 & 115	0.315 in. (8.000 mm)
	160	0.197 in. (5.000 mm)
	205	0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 (0.075 mm) sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Table 407-2
Design Requirements for Asphalt Concrete Hot Mix Surface Course (3/8″ [9.5 mm])

	Control Points	
Sieve (mm)	Percent Passing (%)	
½″ (12.5)	100	
3/8″ (9.5)	90 - 100	
No. 4 (4.75)	90 max.	
No. 8 (2.36)	32 - 67	
No. 16 (1.18)	-	
No. 30 (0.60)	-	
No. 50 (0.30)	-	
No. 200 (0.075)	2 - 10	
Asphalt Binder Content	Design Value	
% Air Voids	4.0	
% VMA	15.0 – 17.0	
Minimum Water Sensitivity Ratio	80.0	
% Anti-strip	As Required	
Fines to Asphalt Ratio*	0.6 – 1.6	
Wheel Tracking Test	Design Gyration	Maximum Rut
(8000 cycles, 100 psi, 64ºC)	75 & 115	0.315 in. (8.000 mm.)
	160	0.197 in. (5.000 mm)
	205	0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 (0.075 mm) sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

LIQUID ANTI-STRIP ADDITIVE

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 404, DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES, is hereby modified as follows:

The following is added as the last bullet following the first paragraph of **Subsection 404.01(b), Design Requirements:**

- All ACHM mixes must contain a liquid, anti-strip additive.

Section 409, MATERIALS AND EQUIPMENT FOR ASPHALT CONCRETE PLANT MIX COURSES, is hereby modified as follows:

The second paragraph of **Subsection 409.02 Asphalt Binder** is hereby deleted and the following substituted therefor:

The asphalt binder for all Asphalt Concrete Hot Mixes shall contain a heat-stable, liquid anti-strip additive. The additive shall be furnished from the Qualified Products List. The additive shall not harm the completed bituminous concrete mixture and must be compatible with the aggregate and asphalt binder supplied for the project. The anti-strip additive shall be added either by an in-line blending process just before introduction of the asphalt binder to the mixer or by blending with the asphalt binder at the asphalt binder terminal. If blended at the terminal, the bill of lading accompanying the load being delivered to the hot mix asphalt plant shall include the anti-strip manufacturer's name, product name, and quantity of all anti-strip additive included in the load.

The liquid anti-strip additive shall be added at rates as indicated below:

- For ACHM mixes where the use of an anti-strip additive is required as determined by the laboratory analysis and mix design procedures, the anti-strip additive shall be added at the rate of 0.5% to 0.75% (0.05% to 0.10% for organosilane based materials) by weight of asphalt binder as determined by the laboratory analysis and laboratory mix design procedures.
- For all other mixes, the manufacturer's recommended dosage of the additive shall be used, but the rate of liquid anti-strip additive shall not be less than 0.25% (0.05% for organosilane based materials) by weight of the asphalt binder.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

DESIGN OF ASPHALT MIXTURES

Section 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added after the first sentence of paragraph 3 **Subsection 404.01 Design of Asphalt Mixtures. (b) Design Requirements:**

Any use of recycled engine oil bottoms (REOB) or other engine oil derivatives in the manufacture or modification of a binder are strictly prohibited. Ground Tire Rubber (GTR) may be added to asphalt binder with blending of GTR into asphalt occurring only at the asphalt terminal. GTR shall be Class 80-1 ground tire rubber as defined by ASTM D5603.

02/27/14
Rev. 11/29/17

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES

Section 410, Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby modified as follows:

Subsection 410.10 Incentives is hereby deleted.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS

Section 410 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth sentence of the first paragraph of **Subsection 410.08, Rolling and Density Requirements and Joints,** is hereby deleted and the following substituted therefor:

> The Engineer will observe the Contractor's use of an electromagnetic surface contact device that meets ASTM D7113/D7113M or the use of a nuclear density gauge to verify that the maximum densities possible are obtained.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

PORTLAND CEMENT CONCRETE DRIVEWAY

Division 500, RIGID PAVEMENT, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 505, PORTLAND CEMENT CONCRETE DRIVEWAY, is hereby modified as follows:

The first paragraph of **Subsection 505.02(b) Joint Filler** is hereby deleted and the following substituted therefore:

> Material for joint filler shall comply with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certificates in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

INCIDENTAL CONSTRUCTION

Sections 609, 611, 617, and 618 of the Standard Specifications for Highway Construction, Edition of 2014, are hereby amended as follows:

Subsection 609.02(c), Materials for Drop Inlets and Junction Boxes, is hereby deleted and the following is substituted therefor:

(c) Steel for welded steel grates and frames shall comply with ASTM A709, Grade 36 (250).

Subsection 611.02(a)(2), Materials for Pipe Underdrains, Outlet Protectors, and Covers, is hereby deleted and the following is substituted therefor:

(2) Corrugated Polyethylene Tubing. The tubing shall be the heavy duty type and shall comply with AASHTO M 252. The tubing shall have a minimum pipe stiffness of 46 psi (3.23 kg/cm^2) at 5% deflection and shall be capable of 60 percent vertical deflection in parallel plate loading without splitting or cracking when tested in accordance with ASTM D 2412.

The second sentence of **Subsection 617.02(a)(2), Materials for Steel Posts,** is hereby deleted and the following is substituted therefor:

(2) Steel Posts. The steel shall comply with ASTM A709, Grade 36 (250).

Subsection 617.02(b)(3), Materials for Terminal Anchor Posts, is hereby deleted and the following is substituted therefor:

(3) The steel anchor posts shall consist of structural shapes of the section shown on the plans, or as otherwise specified, and shall comply with ASTM A709, Grade 36 (250). The upper 15" (380 mm) of the anchor assembly shall be galvanized according to AASHTO M 111.

The third sentence of the third paragraph **Subsection 618.02(a), Posts for Guard Cable,** is hereby deleted and the following is substituted therefor:

The steel shall comply with ASTM A709, Grade 36 (250).

Subsection 618.02(d), Materials for Bolts, Nuts, and Washers, is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

INCIDENTAL CONSTRUCTION

(d) Bolts, Nuts, and Washers. Bolts, nuts, and washers shall conform to the plans and shall be steel complying with ASTM A 307, ASTM F3125, Grade A325, Heavy Hex, Type 1, or ASTM A449 (Heavy Hex), galvanized according to AASHTO M 232. Threads on bolts and nuts shall conform to Unified Coarse Thread Series Class 2A, ANSI B 1.1 (Metric Coarse Thread Series, ANSI B 1.13M, 6g tolerance).

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

LANE CLOSURE NOTIFICATION

Division 600 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 603, Maintenance of Traffic and Temporary Structures, is hereby modified as follows:

The first sentence of the third paragraph **Subsection 603.02 (d)** is hereby deleted and the following substituted therefor:

The Contractor shall provide the Engineer with a minimum of five full business days advance, written notification of any nonemergency lane closure or lane width restriction. The first full business day shall commence at midnight on the first business day following written notification to the Engineer. This advanced notification is required to allow adequate notice for the issuance of over width load permits by the Department.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES

Section 604 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is inserted after the first paragraph of Subsection 604.02(b)**:**

Retroreflective sheeting used on traffic drums shall meet the requirements of ASTM D4956 for Type III or IV with the additional requirements for Reboundable Sheeting. Retroreflective sheeting for delineators shall comply with section 728.

Retroreflective sheeting shall be applied to a properly treated substrate with mechanical equipment and in a manner specified by the sheeting manufacturer. Sign material (substrate) shall be of sufficient thickness and stability to maintain a substantial, effective sign for the duration of the project. One splice will be allowed in retroreflective sheeting on sign blanks. "Left", "Right", "Distances", and "Ahead" will be allowed on signs as inserts. All letters and numerals on inserts shall be of the same size and series as those on the sign face.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)

Section 604 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first paragraph of **Subsection 604.02 Materials (a) General** is hereby deleted and the following substituted therefor:

All work zone traffic control devices used on the project, including sign supports, barricades, traffic drums equipped with flashing lights, crash cushions, and impact attenuators, manufactured after December 31, 2019, shall comply with the requirements of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before December 31, 2019, and successfully tested to the requirements of National Cooperative Highway Research Program (NCHRP) Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. The Contractor shall furnish a certification of such compliance from the manufacturer or supplier of all work zone traffic control devices prior to using the devices on the project. The certification shall state the device meets the requirements of MASH, or in the case that the device was manufactured on or before December 31, 2019, the certification shall state the device meets the requirements of NCHRP 350 or MASH. The certification shall include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments for each device. Devices shall be fabricated and installed in accordance with the plans and with the crash testing documentation provided in the FHWA approval letter which is available at:
http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONCRETE DITCH PAVING

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 605, CONCRETE DITCH PAVING, is hereby modified as follows:

The last sentence of **Subsection 605.03(e) Expansion Joints** is hereby deleted and the following substituted therefor:

> The space shall be filled with approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PIPE CULVERTS FOR SIDE DRAINS

Section 606 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The second paragraph of **Subsection 606.01** is hereby deleted and the following substituted therefore:

> For side drains, when the type is not specified on the plans, the Contractor may furnish any of the types listed in Subsection 606.02 provided that only one type and material shall be used for all side drains of like cross-sectional shape on the project. In addition, when circular pipe is specified for a side drain the Contractor may, at no additional cost to the Department, substitute an arch pipe providing the equivalent waterway.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
GUARDRAIL TERMINAL (TYPE 2)

Section 617 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The third paragraph of subsection **617.01 Description** is hereby deleted and the following substituted therefor:

> The item "Guardrail Terminal (Type 2)" shall consist of furnishing and installing an acceptable crashworthy end terminal for W-beam guardrail at the locations shown in the plans or as directed by the Engineer. The guardrail terminal shall be specifically designed as a W-beam guardrail terminal, and shall provide an anchor against which the full tensile strength of the rail can be developed for downstream hits while remaining crashworthy for end-on impacts. The guardrail terminal shall satisfy the Manual for Assessing Safety Hardware (MASH) Test Level 3 (TL-3). The guardrail terminal shall be of a configuration that will be compatible with the site geometry shown on the plans. Guardrail terminals that require additional grading or require anchoring outside the limits of the site shown on the plans will be acceptable; however, the cost of any additional site work shall be included in the price bid for the particular type of guardrail terminal used. Guardrail terminals shown on the plans shall be 50 feet (15 meters) in length. Any additional length of guardrail needed to fulfill the 50 feet (15 meters) requirement shall be included in the price bid for the particular type of guardrail terminal used.

The first paragraph of subsection **617.02(f), Guardrail Terminal (Type 2),** is hereby deleted and the following substituted therefor:

> The Contractor shall furnish a certification from the manufacturer or supplier that the guardrail terminal meets the requirements of MASH Test Level 3 (TL-3). All materials shall be new. Rail elements and posts shall meet the requirements above. All steel components shall be galvanized. All parts shall be clearly identified for proper assembly and replacement.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
Mulch Cover

Section 620 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection **620.02 Materials (d)** is hereby deleted and the following substituted therefore:

(d) Mulch cover. Shall be a mulch cover system as listed on the Department's Qualified Products List (QPL) or shall consist of straw from threshed rice, oats, wheat, barley, or rye; of wood excelsior; or of hay obtained from various legumes or grasses, such as lespedeza, clover, vetch, soybeans, bermuda, carpet sedge, bahia, fescue, or other legumes or grasses; or a combination thereof. Mulch shall be dry and reasonably free from Johnson grass or other noxious weeds, and shall not be excessively brittle or in an advanced state of decomposition. All material will be inspected and approved prior to use.

The following is inserted after Subsection **620.03 Construction Requirements (c) Seeding (3) Hydro-seeding**:

(4) Mulch Cover. If a mulch cover system listed on the Department's Qualified Products List (QPL) is used then the mulch cover and the seed may be incorporated into one operation.

Subsection **620.03 Construction Requirements (d)** is hereby deleted and the following substituted therefore:

(d) Mulch Cover. If a Mulch Cover system listed on the Department's Qualified Products List (QPL) is used then refer to the application rate listed in the QPL otherwise the mulch cover shall be applied at the rate of 4000 pounds per acre (4500 kg/ha). If the mulch cover and seed are not incorporated into one operation then apply the mulch cover immediately after seeding and spread the mulch cover uniformly over the entire area by approved power mulching equipment. When approved by the Engineer, the Contractor may use hand methods to apply mulch cover to small or inaccessible areas. If the Contractor so elects, an approved mulching machine may be used, whereby the application of mulch cover and tackifier may be combined into one operation. If this method is used, no change in application rates will be allowed. In its final position, the anchored mulch shall be loose enough to allow air to circulate, but compact enough to partially shade the ground and reduce the impact of rainfall on the surface of the soil. Care shall be taken to prevent tackifier materials from discoloring or marking structures, pavements, utilities, or other plant growth. Removal of any objectionable discoloration shall be at no cost to the Department.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION

Mulch Cover

The first paragraph of subsection **620.03 Construction Requirements (e)** is hereby deleted and the following substituted therefore:

(e) Mulch Anchoring. If a mulch cover system is selected from the Department's Qualified Products List (QPL) then no additional anchoring is needed. If a mulch cover system is not used then immediately following or during the application of mulch cover on seeded areas, the mulch shall be anchored by one of the following methods.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
FILTER SOCKS

Section 621 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added to **Subsection 621.01**:

(p) Filter Socks. This item shall consist of furnishing, installing, maintaining, and removing filter socks at locations indicated on the plans or as otherwise directed by the Engineer. Filter socks consist of filter media (compost or non-treated wood) encased in a three-dimensional fabric tube for the purposes of filtering silt, sediment, and other pollutants out of stormwater.

The following is added to **Subsection 621.02**:

(o) Compost or non-treated wood used for filter sock filter media shall be weed, disease, and pathogen free and derived from a clean source of woody organic matter. The media shall be free of any refuse, contaminates, or other materials toxic to plant growth. Test methods for the parameters shown in Table 621-2 should follow the recommendations provided in the AASHTO Standard Practice for Compost for Erosion and Sediment Control (R 51). Compost products must be supplied with a Seal of Testing Assurance (STA) by the U.S. Composting Council from the manufacturer. The Engineer may request a sample for approval prior to being used and materials must comply with all local, state, and federal regulations.

Table 621-2
Filter Sock Media Parameters

Parameters	Reported as (units of measure)	Test Method	Required Value
pH	pH Units	AASHTO R 51	5.0-8.5
Moisture Content	%, wet weight basis	AASHTO R 51	<60%
Organic Matter Content	%, dry weight basis	AASHTO R 51	>30%
Particle Size	% passing a selected mesh size, dry weight basis	AASHTO R 51	99% passing a 2” sieve <40% passing a 3/8” sieve
Physical Contaminates (man-made inert material)	%, dry weight basis	N/A	<1%

Filter sock containment shall be produced from 5-mil-thick continuous high density polyethylene (HDPE) filament or multi-filament polypropylene (MFPP), woven or knitted into a tubular mesh netting. Openings in the mesh shall range from 1/8th to 3/8th inch. This tube shall then be filled to the specified diameter of the sock with filter media which meets the specifications outlined in Table 621-2. Filter sock fabric shall have a minimum functional longevity of 9 months.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

FILTER SOCKS

Furnish filter socks with a diameter of 8-9, 12, 18, or 24 inches in diameter in variable lengths as directed by the Engineer.

Use 2" by 2" hardwood stakes of a length which will allow them to be driven at least one foot into the soil while leaving at least 3" projecting above the sock after installation. In rocky or other difficult locations steel stakes may be used if directed by the Engineer. Sandbags may be used as necessary to anchor the filter sock for installation on paved surfaces. Placement shall be as directed by the Engineer.

The following is added to **Subsection 621.03**:

(q) Trenching of filter socks is not required but woody vegetation shall be cut at ground level or otherwise removed, and uneven or rocky surfaces shall be graded or raked to ensure the socks uniformly contact the ground. The socks shall be secured with stakes driven through the center of the devices or installed as recommended by the manufacturer. For perimeter control or on slopes, stakes shall be installed on a maximum of 10 foot centers and the ends of the socks shall be directed upslope to prevent storm water from running around the end of the sock. For ditch checks and drop inlets, stakes shall be installed on a maximum of 4 foot centers. Additional stakes may be necessary as directed by the Engineer. Filter socks may be laid end to end or overlapped according to the manufacturer's directions.

Routinely maintain the socks in good condition (including staking, anchoring, etc.) Accumulated sediment shall be removed when the sediment reaches one-half the height of the sock or as directed by the Engineer. Sediment removed shall be deposited and stabilized as described in Section 110 of the Standard Specifications for Highway Construction, Edition of 2014. Repair of or complete replacement of torn or damaged socks shall be performed as required or as directed by the Engineer. Filter socks shall be carefully removed and replaced as required to facilitate construction operations.

When the required work has been completed, the area has been stabilized, and the filter socks are no longer required as approved by the Engineer, the containment material shall be cut and the core material shall be evenly distributed on the surrounding ground area. Containment shall be removed and disposed of.

The following is added to **Subsection 621.04**:

(q) Filter Socks will be measured by the linear foot (meter) complete in place; measurement will be made along the centerline of the top of the filter sock. No payment will be made for overlap. No payment will be made for additional length beyond that approved by the Engineer.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

FILTER SOCKS

The following is added to **Subsection 621.05:**

(q) Filter Socks completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot (meter) for Filter Socks, which price shall be full compensation for furnishing all materials; for installation and maintenance of filter socks; for temporarily removing and replacing filter socks as required to facilitate construction operation; for removal and disposal of the filter socks as directed; and for all labor, equipment, tools, and incidentals necessary to complete the work.

The following is added as the last Pay Item in **Subsection 621.05**:

Pay Item	**Pay Unit**
Filter Sock (___”)	Linear Foot (Meter)

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONCRETE ISLAND

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 632, CONCRETE ISLAND, is hereby modified as follows:

The last sentence of the fifth paragraph of **Subsection 632.03 Costruction Requirements** is hereby deleted and the following substituted therefor:

> The space shall be filled with approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 633, Concrete Walks, Concrete Steps, and Hand Railing, is hereby modified as follows:

Subsection 633.02(E) Expansion Joints is hereby deleted and the following substituted therefor:

> A space not less than ½" (12mm) wide shall be left between the sidewalks and adjacent structures. This space shall be filled with approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project. No space or joint filler is required between the sides of the walks and adjacent curbs.
>
> Transverse expansion joints shall be placed at a maximum interval of 45' (13.7m). Transverse joints shall be constructed using approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CURBING

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 634, Curbing, is hereby modified as follows:

The last paragraph **of Subsection 634.02 Materials** is hereby deleted and the following substituted therefor:

> Material for the joint filler shall comply with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL FACILITIES

Sections 712, 713, 714, 715, 728 and 730 of the Standard Specifications for Highway Construction, Edition of 2014, are hereby amended as follows:

Subsection 712.02(a) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(a) Pole shafts shall comply with ASTM A 1011, SS, Grade 50 (345), ASTM A709, Grade 50 (345), ASTM A 595 Grade A, or ASTM A 572, Grade 50 or Grade 65. Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 712.02(c) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(c) Anchor base plates shall comply with ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 712.02(e) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(e) Hex nuts shall comply with AASHTO M 292 Grade 2H or ASTM A653 Grade 2H or ASTM A653 Grade DH or DH3 (Grade 10S or 10S3). The thread series shall correspond with that of the bolt furnished. Washers shall comply with ASTM F436. Galvanizing shall comply with AASHTO M 232 or ASTM B 695 Class 40 or 50. Nuts shall be galvanized by the same process as that of the bolts.

Subsection 712.02(f) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(f) Concrete shall comply with Section 802 for Class S concrete. The Department will perform all acceptance sampling and testing at the frequencies shown for Contractor acceptance in Subsection 802.06. Reinforcing steel shall comply with Section 804 for Grade 60 steel.

The third paragraph of **Subsection 713.02 Materials for Span Wire Assembly** is hereby deleted and the following is substituted therefor:

Suitable cable ties shall be provided to suspend the traffic control cable at intervals not to exceed 18" (450 mm). Necessary eyebolts, washers, nuts, and fittings shall be galvanized steel complying with AASHTO M 232 or ASTM B695, Class 40 or 50.

Subsection 714.02(a) Materials for Traffic Signal Mast Arm and Pole with Foundation is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL FACILITIES

(a) Poles and mast arms shall be ASTM A 1011, SS, Grade 50 (345), ASTM A709, Grade 50 (345), ASTM A 595 Grade A or ASTM A 572, Grade 50 or Grade 65. Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(c) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(c) Anchor Base Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(e) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(e) Hex nuts shall comply with AASHTO M 292 Grade 2H or ASTM A563 Grade DH or DH3 (Grade 10S or 10S3). The thread series shall correspond with that of the bolt furnished. Washers shall comply with ASTM F436. Galvanizing shall comply with AASHTO M 232 or ASTM B695, Class 40 or 50. Nuts shall be galvanized by the same process as that of the bolts.

Subsection 714.02(f) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(f) Clamp Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(g) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(g) Flange and Gusset Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(h) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(h) Clamp and Flange Bolts shall be ASTM F3125, Grade A325, Type 1, Heavy Hex with the requirements of Annex A2. Galvanizing shall comply with AASHTO M 232 or ASTM B695, Class 40 or 50.

Subsection 714.02(i) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL FACILITIES

(i) Concrete shall comply with Section 802 for Class S concrete. The Department will perform all acceptance sampling and testing at the frequencies shown for Contractor acceptance testing in Subsection 802.06. Reinforcing steel shall comply with Section 804 for Grade 60 steel.

Subsection 715.02(c) Materials for Traffic Signal Pedestal Pole With Foundation is hereby deleted and the following is substituted therefor:

(c) Anchor Base Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 715.02(e) Materials for Traffic Signal Pedestal Pole With Foundation is hereby deleted and the following is substituted therefor:

(e) Hex nuts shall comply with AASHTO M 292 Grade 2H or ASTM F436 Grade DH or DH3 (Grade 10S or 10S3). The thread series shall correspond with that of the bolt furnished. Washers shall comply with ASTM F436. Galvanizing shall comply with AASHTO M 232 or ASTM B695, Class 40 or 50. Nuts shall be galvanized by the same process as that of the bolts.

The fifth and sixth paragraphs of **Subsection 728.02 Materials for Delineators** are hereby deleted and the following are substituted therefor:

Steel posts for bridge rail installation shall be a 1” x 1” x 3/16” (25 mm x 25 mm x 4.76 mm) angle weighing 1.61 pounds per foot (2.4 kg/m), and manufactured from ASTM A709, Grade 36. Length of post and spacing of holes shall be as shown on the plans.

All delineators posts shall be hot dip galvanized in accordance with ASTM A123 and all fabrication, including punching or drilling holes, shall be completed before the posts are galvanized.

The second and third paragraphs of **Subsection 730.02 Materials for Breakaway Sign Support** are hereby deleted and the following are substituted therefor:

All structural steel, except pipe posts but including base plates on pipe posts, and steel fuse plates, shall comply with AASHTO M 270 Grade 50. Pipe posts shall be structural steel complying with ASTM A 53 Grade B pipe. Steel bolted or welded to the primary support posts and not affecting the breakaway function, may be AASHTO M 270 Grade 36.

All high strength bolts, nuts, and washers shall comply with ASTM F3125, Grade A325, Type 1, Heavy Hex with the requirements of Annex A2.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL FACILITIES

The third paragraph of **Subsection 730.03 Fabrication for Breakaway Sign Support** is hereby deleted and the following is substituted therefor:

All structural steel shall be galvanized after fabricating according to AASHTO M 111. All bolts, nuts, and washers shall be galvanized according to AASHTO M 232 or ASTM B695, Class 40 or 50.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

GENERAL REQUIREMENTS FOR SIGNS

Section 723 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 723.02(b) is hereby deleted and the following is substituted therefor:

(b) Sign Panels. Standard signs shall consist of a single sheet of aluminum alloy (ASTM B 209, Alloy 5052 H38) without stiffeners on the back. Minimum sign blank thickness shall be 0.080" (2.0 mm) for a sign size of 9 square feet (0.84 sq m) or less or 0.100" (2.5 mm) for a sign size greater than 9 square feet (0.84 sq m). Sign blanks shall be flat and straight and within commercial tolerances established by the aluminum industry.

Guide signs shall be fabricated using one piece extruded panels fabricated of aluminum alloy (ASTM B221, Alloy 6063 T6).

Extruded panel signs shall consist of sign panels; stringers or horizontal supporting members; necessary fasteners for assembling the units; reflective materials; letters; numerals; symbols; and border. All extrusions and fasteners shall be applied without causing objectionable projections on the sign face.

The one piece extruded aluminum panels shall be a minimum of 12" (300 mm) in width except one 6" (150 mm) panel may be used per sign face when necessary to construct the sign as shown on the plans.

All extruded panels shall be bolted together at every other hole (every 24" [610 mm]) with the faces and ends in alignment.

Single sheet and extruded panels to which reflective sheeting is to be applied shall be conversion coated as specified in ASTM B449 or ASTM B921 per the sheeting manufacturer's recommendations.

All fabrication, including cutting and punching of holes, excluding holes for demountable letters, numerals, symbols, and borders, shall be completed before conversion coating.

Sign panels shall be free of buckles, warp, dents, cockles, burrs, and defects resulting from fabrication. The surface of all sign panels shall be flat.

The Contractor shall submit a Certified Test Report to the Engineer covering the sign panels.

The first paragraph of **Subsection 723.02(c)** is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

GENERAL REQUIREMENTS FOR SIGNS

(c) Retroreflective Sheeting. The retroreflective sheeting for signs shall comply with ASTM D4956 for Type III, IV, VIII, or IX retroreflective sheeting, except that Type IX retroreflective sheeting shall be used on all W1-6, W1-8, and OM-3 signs. ASTM D4956 Type XI sheeting shall be used on all R5-1 and R5-1a signs. All retroreflective sheeting shall have either Class 1 or Class 2 backing.

Subsection 723.02(d) is hereby deleted and the following is substituted therefor:

(d) Legend. All legend, which includes letters, numerals, symbols, arrows, and border, shall have a regular outline, be clean cut and sharp, and shall have a continuous stroke and border without ragged or torn edges.

All legend on guide signs shall be of the size shown on the plans. Legend on standard signs shall comply with the latest revision of FHWA Standard Highway Signs.

The legend on freeway main lane guide signs shall be demountable. Unless otherwise specified, the legend on all other guide signs shall be manufactured using either direct application or acrylic overlay film. All other signs shall be manufactured using standard industry processes, including silk screening, acrylic overlay film, and digital printing. Digitally printed signs shall be overlaid with a clear UV film per the sheeting manufacturer's recommendation.

All demountable legend shall be of the same manufacturer. The sign area outside the corner radius shall not be trimmed to match the border radius.

Frames for border strips, corners, shields, and legend shall be fabricated from 0.063" (1.6 mm) sheet aluminum complying with the requirements of ASTM B209, Alloy 5052-H38. Mounting holes shall be provided with the frames to permit the use of screws, bolts, rivets, or other fasteners of stainless steel, galvanized steel, or aluminum to fasten the frames to the sign face, subject to the condition that dissimilar metals shall be insulated to prevent corrosion.

The aluminum frames shall comply with Subsection 723.02(b).

All border material shall be secured from the same company that furnishes the cutout letters, numerals, etc. and shall be mounted in the same manner as the cutout letters.

Transparent colors, inks, paints, and films used in the sign manufacturing process shall be of the type and quality recommended by the manufacturer of the reflective sheeting and shall conform to red, blue, yellow, and green colors approved by the FHWA and shown in the MUTCD and FHWA Standard Highway Signs. The Contractor shall provide a sheeting manufacturer's full component system warranty, and shall provide certification that the materials used shall meet all MUTCD minimum requirements for retroreflectivity and contrast for the warranty period of the sheeting.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
STRUCTURES

Sections 802, 805, 807, 809 and 817 of the Standard Specifications for Highway Construction, Edition of 2014, are hereby amended as follows:

The fifth sentence of the ninth paragraph **802.14(b), Permanent Steel Deck Forms,** is hereby deleted and the following is substituted therefor:

(b) However, welding of form supports to flanges of steels other than ASTM A709, Grade 36 (250), 50 (345), or 50W (345W) of a weldable grade, and to those portions of a flange subject to tensile stresses will not be permitted except as provided for in the plans. Welding shall be accomplished by certified welders and according to Subsection 807.26 except that 1/8" (3mm) fillet welds will be permitted.

Subsection 805.03(c) is hereby deleted and the following is substituted therefor:

(c) Unless otherwise specified, steel piles shall consist of structural shapes of the section shown on the plans and shall comply with ASTM A709, Grade 36 (250).

Subsection 807.05, Structural Steel, is hereby deleted and the following substituted therefor:

Unless otherwise specified, structural steel shall conform to the requirements of Structural Steel for Bridges, ASTM A709, except that the Charpy V-Notch Impact test requirements shall apply only to materials designated on the contract drawings as main load carrying member components. When Charpy V-Notch tests are required, the test results shall conform to the requirements specified for Zone 1 minimum service temperature.

Grade 36 (250) shall be furnished unless otherwise specified.

Steel shall be furnished according to the following specifications:

(a) Carbon Steel. Unless otherwise specified, structural carbon steel for bolted or welded construction shall conform to ASTM A709**,** Grade 36 (250). Fill or shim plates ¼" (6mm) or less in thickness used in high strength bolted connections may be ASTM A1011, SS, Grade 36 (250), Type 2, Grade 40 (275), Grade 50 (340), or Grade 55 (380) or ASTM A 1011 HSLAS, Grade 50 (340), Class 1 or Grade 55 (380), Class 1.

(b) High Strength Low-Alloy Structural Steel. High strength low alloy structural steel shall conform to ASTM A709, Grades 50 (345) or 50W (345W). Fill or shim plates ¼" (6mm) or less in thickness used in high strength bolted connections of painted bridges may be ASTM A 1011, SS, Grade 50 (340), or Grade 55 (380) or ASTM A 1011 HSLAS, Grade 50 (340), Class 1 or Grade 55 (380), Class 1.

Fill or shim plates ¼" (6mm) or less in thickness used in high strength bolted connections of unpainted weathering steel may be ASTM A 606, Type 4.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

STRUCTURES

(c) High-Yield-Strength, Quenched and Tempered Alloy Steel Plate. High yield strength, quenched and tempered alloy steel plate shall conform to ASTM A514, Grade 100 (690).

Quenched and tempered alloy steel structural shapes and seamless mechanical tubing shall meet all of the mechanical and chemical requirements of ASTM A514, Grade 100 (690), except that the specified maximum tensile strength may be 145,000 psi (1000 MPa) for seamless mechanical tubing.

(d) Structural Steel for Eyebars. Steel for eyebars shall be of a weldable quality conforming to ASTM A709, Grade 36 (250), Grade 50 (345), or Grade 50W (345W).

Subsection 807.06, High Strength Bolts, Nuts, and Washers for Structural Steel Connections, is hereby deleted and the following is substituted therefor:

(a) Specifications. High strength bolts shall be heavy hex and shall conform to the requirements of ASTM F3125, Grade A325, Heavy Hex, except as modified herein. Type 1 bolts shall be provided when used with painted structural steel or when galvanized bolts are specified. Type 3 bolts shall be provided when used with unpainted weathering structural steel. The maximum hardness of high strength bolts shall be 33 Hardness Rockwell C.

Nuts shall be heavy hex and shall conform to the requirements of ASTM A563 or AASHTO M 292. Nuts for plain, uncoated Type 1 bolts shall be Grade 2H, Grade DH or DH3. Nuts for Type 3 bolts shall be Grade DH3. Nuts for galvanized bolts shall be Grade 2H or Grade DH. When galvanized nuts are furnished, the zinc coating, overtapping, lubrication, and proof loading shall be in accordance with ASTM A563.

Washers shall conform to the requirements of ASTM F436. Where necessary, washers may be clipped on one side to a point not closer than 7/8 of the bolt diameter from the center of the washer. Beveled washers shall be used in the flanges of American Standard beams and channels. Weathering steel washers shall be used with Type 3 bolts.

When galvanized bolt assemblies are specified, the bolts, nuts, and washers shall be galvanized according to AASHTO M 232, Class C, or ASTM B695, Class 50. All components in a fastener assembly shall be galvanized by the same process.

Galvanized nuts shall be provided with a lubricant that is clean and dry to the touch. The lubricant shall contain a visible dye so that a visual check can be made for the lubricant at the time of field installation. Plain, uncoated bolts, nuts, and washers must be "oily" to the touch when installed.

(b) Required Tests. High strength fasteners, plain and galvanized, shall be subjected to a rotational capacity test according to ASTM F3125 Annex A2, and shall meet the following requirements:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

STRUCTURES

1. Go through two times the required number of turns (from snug tight conditions) indicated in Table 807-1, in a Skidmore-Wilhelm Calibrator or equivalent tension measuring device, without stripping or failure.
2. During this test, the maximum recorded tension shall be equal to or greater than 1.15 times the Minimum Bolt Tension as shown in Table 807-3.
3. The measured torque needed to produce the Minimum Bolt Tension shall not exceed the value obtained by the following equation:

$$\text{Torque} = 0.25 * P * D$$

where:
Torque = Maximum Measured Torque
(Foot-pounds [newton meter])
P = Measured Bolt Tension (pounds [kilonewtons])
D = Nominal Diameter (Feet [mm])

Proof load tests according to ASTM F606M (F606) Method 1 are required for the bolts. Wedge tests of full size bolts are required according to Section 10 of ASTM F3125. Galvanized bolts shall be wedge tested after galvanizing. Proof load tests according to ASTM A563 are required for the nuts. The proof load tests for nuts to be used with galvanized bolts shall be performed after galvanizing, overtapping, and lubricating.

The Engineer shall be furnished with a manufacturer's certification for all high strength bolts, nuts, and washers used on the project. This certification shall provide a lot number, shop order number, or other identification such that the heat number from which the items were made can be traced. This identifying number shall also appear on the sealed shipping containers. The certification shall indicate when and where all testing was done, including the rotational capacity tests, and shall include the zinc thickness when galvanized bolts, nuts, and washers are used.

Item (1) of **Subsection 807.26(b), Modification of Structural Welding Code,** is hereby deleted and the following is substituted therefor:

(1) Subparagraph 1.3.4 is modified to include:

Electroslag welding shall not be used as a welding process on bridge structures.

The first paragraph of **Subsection 807.71, High Strength Bolt Connections,** is hereby deleted and the following is substituted therefor:

(a) General. High strength bolts meeting the requirements of ASTM F3125, Grade A325, Heavy Hex, including Annex A2, shall be furnished unless otherwise specified.

Subsection 807.77, Materials (a) Inorganic Zinc-Rich Primer, is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

STRUCTURES

(a) Inorganic Zinc-Rich Primer. The prime coat shall be an inorganic zinc-rich paint complying with the requirements of AASHTO M 300 for Type 1 or Type II.

The paint shall qualify for a Class A classification (slip coefficient of 0.33 or greater) when tested according to "Testing Methods to Determine the Slip Coefficient for Coatings used in Bolted Joints", in Appendix A of *Specification for Structural Joints Using High-Strength Bolts* as published by the Research Council on Structural Connections.

The first paragraph of **Subsection 809.02(b), Armored Joint with Neoprene Strip Seal,** is hereby deleted and the following is substituted therefor:

(b) Armored Joint with Neoprene Strip Seal. The armored joint shall consist of steel extrusions with neoprene strip seal. Steel extrusions shall conform to the requirements of ASTM A709, Grade 50W, or as specified.

Subsection 817.02(b), Steel Items, is hereby deleted and the following is substituted therefor:

(b) Steel Items. Bars, plates, and structural shapes shall be of steel conforming to the requirements of ASTM A709, Grade 36 (250), except that Charpy V-Notch Impact tests are not required.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONCRETE FOR STRUCTURES

Section 802 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth paragraph of **Subsection 802.19(b)(1), Class 1, Ordinary Surface Finish,** is hereby deleted and the following is substituted therefor:

The tops of caps shall be properly finished with a steel trowel to a smooth finish at the plan elevation and shall not be deformed, recessed, or irregular. Any misalignment in the area of the bridge seat shall be corrected to form a level surface. All corrective action (including changes to the finished elevation of the concrete surface) greater than 1/8” (3 mm) must be submitted to the Engineer for review and approval.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

REINFORCING STEEL FOR STRUCTURES

Section 804 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 804.02 Materials (b) Wire and Wire Fabric is hereby deleted and the following is substituted therefor:

(b) Wire and Welded Wire Reinforcement. Wire, when used as reinforcement in concrete, shall conform to the requirements of AASHTO M 336. For plain wire, Grade 70 shall be furnished unless otherwise specified.

Welded wire reinforcement, when used as reinforcement in concrete, shall conform to the requirements of AASHTO M 336. For welded wire reinforcement, Grade 65 shall be furnished unless otherwise specified. The type of welded wire reinforcement shall be approved by the Engineer.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

STEEL STRUCTURES

Division 800 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 807, Steel Structures, is hereby modified as follows:

The first paragraph **Subsection 807.02** is hereby deleted and the following substituted therefor:

All structural steel fabricators shall be certified for AISC Category SBR (Simple Steel Bridge Structures), IBR (Intermediate Steel Bridge Structures - Major), ABR (Advanced Steel Bridge Structures - Major), or CPT (Bridge Component Standard), as appropriate, except as provided herein. In addition, the fabricator shall have the appropriate Complex Coatings Endorsement (P1, P2, or P3) which qualifies them to apply complex coating systems.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

INSTALLATION OF ELASTOMERIC BEARINGS

Section 808 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first paragraph of **Subsection 808.08** is hereby deleted and the following is substituted therefor:

808.08 Installation. Reinforced bearings shall be placed on level, uniform surfaces that are properly finished to the plan elevation and shall not be deformed, recessed, or irregular. Any misalignment in the support area of the bridge seat shall be corrected to form a level surface. All corrective action (including changes to the finished elevation of the concrete surface) greater than 1/8" (3 mm) must be submitted to the Engineer for review and approval. Reinforced bearings shall be set level in their specified position and shall have uniform bearing upon the support area. Bottom external load plates (masonry plates), when used, shall be set on unreinforced pads. Preformed fabric pads meeting the requirements of Subsection 807.15(a) may be used in lieu of unreinforced pads.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ELASTOMERIC BEARINGS

Section 808 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The third and fourth paragraph of **Subsection 808.02 Materials** is hereby deleted and the following is substituted therefor:

Steel lamina shall be rolled mild steel confirming to ASTM A709, Grade 36 [250] (except that Charpy V-Notch Impact tests are not required), ASTM A 1011, SS, or HSLAS, or equivalent, shall have a minimum yield strength of 30,000 psi (205 MPa), and shall be ordered to the nominal thickness specified on the plans.

External load plates shall conform to the requirements of ASTM A709, Grade 36 (250), 50 (345), or 50W (345W) as noted on the plans, except that Charpy V-Notch Impact tests are not required.

The following is added to **Subsection 808.04 Tolerances**

(b) External load plates:
5) Relation to centerline of bearing ..... ± 1/8" (± 3 mm)

ARKANSAS
STATE HIGHWAY COMMISSION

STANDARD SPECIFICATIONS
FOR
HIGHWAY CONSTRUCTION

EDITION OF 2014

PROPOSAL DOCUMENTS
AND
SCHEDULE OF ITEMS

ARKANSAS STATE HIGHWAY COMMISSION

PROPOSAL DOCUMENTS

PROPOSAL FOR CONSTRUCTING:

THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A RAILROAD OVERPASS AND REPLACE A BRIDGE STRUCTURE WITH A REINFORCED CONCRETE BOX CULVERT ON HIGHWAY 89 IN FAULKNER COUNTY. THIS PROJECT CONSISTS OF CLEARING AND GRUBBING, REMOVAL AND DISPOSAL ITEMS, EARTHWORK, AGGREGATE BASE COURSE, ACHM BASE, BINDER, AND SURFACE COURSES, COLD MILLING ASPHALT PAVEMENT, ACHM PATCHING OF EXISTING ROADWAY, APPROACH SLABS, MAINTENANCE OF TRAFFIC, MINOR DRAINAGE STRUCTURES, GUARDRAIL, EROSION CONTROL ITEMS, RUMBLE STRIPS IN ASPHALT SHOULDERS, TRAFFIC SIGNAL ITEMS, ONE CONT. COMPOSITE PLATE GIRDER UNIT (TOTAL LENGTH 348.22'), ONE CONT. COMPOSITE PLATE GIRDER UNIT (TOTAL LENGTH 222.16'), ONE TRIPLE R.C. BOX CULVERT (TOTAL LENGTH 39.00'), PAVEMENT MARKING, AND MISC. ITEMS.

State Highway 89, Section 4 & 5, in **FAULKNER** County, Arkansas, in accordance with Standard Specifications for Highway Construction, Edition of 2014; the Supplemental Specifications and Special Provisions attached hereto; and the Construction Plans on file in the Office of the State Highway Commission, designated as

Job **080457** **FEDERAL AID PROJECT CMF-STPU-0023(44)**

Job Name: **UPRR OVERPASS & REALIGN. (MAYFLOWER) (S)**

said project being approximately **2.009 miles in length.**

Proposal received until 10:00 a.m. on November 4, 2020

TO THE ARKANSAS STATE HIGHWAY COMMISSION:

Gentlemen: By submission of your bid, you agree to the following:

It is hereby certified that a careful examination has been made of the Plans, Specifications, Supplemental Specifications, Special Provisions, and Form of Contract and the site of the work throughout its whole extent. On the basis of the Plans, Specifications, Supplemental Specifications, Special Provisions, and Form of Contract, the bidder proposes to furnish all necessary machinery, equipment, tools, labor and other means of construction, and to furnish all materials as specified, in the manner and at the time prescribed, and to finish the entire project within the time hereinafter proposed. The bidder understands that the quantities of work mentioned herein are approximate only, and are subject to increase or decrease, and hereby proposes to perform all quantities of work, whether increased or decreased, in accordance with the provisions of the Specifications, and at the unit prices bid in the attached Schedule of Items.

Receipt is hereby specifically acknowledged, and complete examination expressly guaranteed of the following:

1. Standard Specifications for Highway Construction, Edition of 2014.
2. Supplemental Specifications.
3. Special Provisions.
4. Proposal Documents.
5. Schedule of Items.
6. Construction Plans.

The bidder further proposes to perform all Extra Work that may be required, on the basis provided in the Specifications, and to give such work personal attention, and to secure economical performance.

The bidder further proposes to execute the contract agreement, and to furnish satisfactory bonds within ten days after he has received notice that he has been awarded the contract. The bidder further agrees to begin work when ordered by the Engineer, or within ten days thereafter, and to complete the work **within the number of calendar days bid by the bidder in accordance with the Job Special Provision "Site Use (A+C Method)-Calendar Day Contract."**

PROPOSAL DOCUMENTS

(Continued)

The bidder also proposes to furnish a surety Performance bond or bonds in a sum equal to the full amount of the contract and a surety Payment bond or bonds in a sum equal to 80% of the full amount of the contract. These bonds shall not only serve to guarantee the completion of the work and payment of all bills and claims by the bidder, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications and Special Provisions fulfilled.

The bidder shall furnish a Proposal Guaranty in the form specified in Subsection 102.09 of the Specifications, in the amount of five percent (5%) of the total amount bid, which is submitted as a guarantee of the good faith of the proposal, and that the Bidder will enter into written contract, as provided, to do the work should the award be made to him; and it is hereby agreed that if, at any time other than as provided in Subsection 102.11 of the Standard Specifications, Withdrawal/Modification of Proposals, the bidder should withdraw his proposal, or should fail to execute the contract and furnish satisfactory bonds as herein provided, if his proposal is accepted, the Arkansas State Highway Commission, in either of such events, shall be entitled and is hereby given the right to retain the Proposal Guaranty, not as a penalty, but as liquidated damages, it being understood and agreed by the bidder that the amount of the Proposal Guaranty is a reasonable sum to be fixed as liquidated damages considering the damages the Arkansas State Highway Commission will sustain in the event of the bidder's withdrawal of his proposal, or failure to execute the contract and furnish satisfactory bonds if his proposal is accepted, and said amount is herein agreed upon and fixed as liquidated damages because of the difficulty of ascertaining the exact amount of damage that may be sustained by reason of the above set out circumstances.

Arkansas Department of Transportation
Schedule of Items

State Job No.: 080457 | Date Estimated: 8/27/2020

Job Name: UPRR OVERPASS & REALIGN. (MAYFLOWER) (S) | Date Revised:

Federal Aid Project: CMF-STPU-0023(44)

Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
Section 01 - PROPOSAL ITEMS					
0001	SP&201 - CLEARING	250.000	STA		
0002	SP&201 - GRUBBING	250.000	STA		
0003	202 - REMOVAL AND DISPOSAL OF RETAINING WALLS	120.000	LF		
0004	202 - REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT	357.000	SQYD		
0005	202 - REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	308.000	SQYD		
0006	202 - REMOVAL AND DISPOSAL OF WALKS	13.000	SQYD		
0007	202 - REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	2.000	EACH		
0008	202 - REMOVAL AND DISPOSAL OF PIPE CULVERTS	31.000	EACH		
0009	202 - REMOVAL AND DISPOSAL OF PUMP ISLAND	4.000	EACH		
0010	SP - REMOVAL OF RUMBLE STRIP	4,542.000	LF		
0011	202 - REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER	218.000	LF		
0012	202 - REMOVAL AND DISPOSAL OF BUILDINGS	16.000	EACH		
0013	202 - REMOVAL AND DISPOSAL OF SIGNS	19.000	EACH		
0014	SP&202 - REMOVAL AND DISPOSAL OF GUARDRAIL	1,886.000	LF		
0015	205 - REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.000	L.S.		
0016	205 - REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 3)	1.000	L.S.		
0017	SPSS210 - UNCLASSIFIED EXCAVATION	87,245.000	CUYD		
0018	SP - SELECT GRANULAR BACKFILL	5,682.000	CUYD		
0019	210 - COMPACTED EMBANKMENT	297,379.000	CUYD		
0020	SP&210 - SOIL STABILIZATION	1,250.000	TON		
0021	SS&303 - AGGREGATE BASE COURSE (CLASS 7)	71,883.000	TON		
0022	SS&401 - TACK COAT	11,542.000	GAL		
0023	SPSS405 - MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	11,239.000	TON		

State Job No.: 080457 Date Estimated: 8/27/2020
Job Name: UPRR OVERPASS & REALIGN. (MAYFLOWER) (S) Date Revised:
Federal Aid Project: CMF-STPU-0023(44)

Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0024	SPSS405 - ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2") (MINIMUM BID $120.00)	17.000	TON		
0025	SPSS405 - ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2") (MINIMUM BID $120.00)	451.000	TON		
0026	SPSS406 - MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	14,773.000	TON		
0027	SPSS406 - ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1") (MINIMUM BID $120.00)	493.000	TON		
0028	SPSS406 - ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1") (MINIMUM BID $120.00)	187.000	TON		
0029	SPSS407 - MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	21,395.000	TON		
0030	SPSS407 - ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2") (MINIMUM BID $120.00)	971.000	TON		
0031	SPSS407 - ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2") (MINIMUM BID $120.00)	274.000	TON		
0032	412 - COLD MILLING ASPHALT PAVEMENT	2,711.000	SQYD		
0033	SPSS414 - ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	127.000	TON		
0034	SPSS415 - ACHM PATCHING OF EXISTING ROADWAY	127.000	TON		
0035	504 - APPROACH SLABS	639.800	CUYD		
0036	SS&505 - PORTLAND CEMENT CONCRETE DRIVEWAY	1,555.490	SQYD		
0037	602 - FURNISHING FIELD LABORATORY	1.000	EACH		
0038	SP&602 - FURNISHING FIELD OFFICE	1.000	EACH		
0039	SPSS603 - MAINTENANCE OF TRAFFIC	1.000	L.S.		
0040	603 - 18" TEMPORARY CULVERT	160.000	LF		
0041	603 - 60" TEMPORARY CULVERT	282.000	LF		
0042	603 - 21" X 15" TEMPORARY CULVERT	28.000	LF		
0043	SS&604 - SIGNS	3,097.000	SQFT		
0044	SPSS604 - CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	50.000	EACH		

State Job No.: 080457 Date Estimated: 8/27/2020
Job Name: UPRR OVERPASS & REALIGN. (MAYFLOWER) (S) Date Revised:
Federal Aid Project: CMF-STPU-0023(44)

Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0045	SS&604 - BARRICADES	704.000	LF		
0046	SS&604 - TRAFFIC DRUMS	741.000	EACH		
0047	SS&604 - FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	4,931.000	LF		
0048	SS&604 - RELOCATING PRECAST CONCRETE BARRIER (MAX. BID 25% OF ITEM NUMBER 0047)	3,106.000	LF		
0049	604 - CONSTRUCTION PAVEMENT MARKINGS	113,644.000	LF		
0050	604 - REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	2,500.000	LF		
0051	604 - REMOVAL OF PERMANENT PAVEMENT MARKINGS	6,837.000	LF		
0052	SS&604 - ADVANCE WARNING ARROW PANEL	6.000	DAY		
0053	SPSS604 - PORTABLE CHANGEABLE MESSAGE SIGN	6.000	WEEK		
0054	SS&604 - VERTICAL PANELS	196.000	EACH		
0055	SS&605 - CONCRETE DITCH PAVING (TYPE B)	704.000	SQYD		
0056	606 - 18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	356.000	LF		
0057	606 - 24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	920.000	LF		
0058	606 - 36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	140.000	LF		
0059	SP&606 - 48" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	28.000	LF		
0060	606 - 12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	386.000	LF		
0061	SPSS606 - 18" SIDE DRAIN	654.000	LF		
0062	SPSS606 - 24" SIDE DRAIN	114.000	LF		
0063	SS&606 - 21" X 15" SIDE DRAIN	258.000	LF		
0064	606 - 18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	8.000	EACH		
0065	606 - 24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	23.000	EACH		
0066	606 - 36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2.000	EACH		

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0067	606 - 48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4.000	EACH		
0068	606 - 29" X 18" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	2.000	EACH		
0069	606 - SELECTED PIPE BEDDING	320.000	CUYD		
0070	SS&609 - DROP INLETS (TYPE C)	9.000	EACH		
0071	SS&609 - DROP INLETS (TYPE E)	1.000	EACH		
0072	SS&609 - DROP INLETS (TYPE MO)	9.000	EACH		
0073	SS&609 - DROP INLETS (TYPE RM)	3.000	EACH		
0074	SS&609 - DROP INLETS (TYPE ST)	1.000	EACH		
0075	SS&609 - DROP INLETS (TYPE SPECIAL)	5.000	EACH		
0076	SS&611 - 4" PIPE UNDERDRAINS	9,000.000	LF		
0077	SS&611 - UNDERDRAIN OUTLET PROTECTORS	36.000	EACH		
0078	614 - CONCRETE SPILLWAY (TYPE A)	6.000	EACH		
0079	SS&617 - GUARDRAIL (TYPE A)	2,525.000	LF		
0080	SS&617 - TERMINAL ANCHOR POSTS (TYPE 1)	1.000	EACH		
0081	SS&617 - GUARDRAIL TERMINAL (TYPE 2)	1.000	EACH		
0082	619 - WIRE FENCE (TYPE A)	5,147.000	LF		
0083	619 - WIRE FENCE (TYPE D)	497.000	LF		
0084	619 - WIRE FENCE (TYPE D-1)	1,476.000	LF		
0085	619 - 5' STEEL CHAIN LINK FENCE	210.000	LF		
0086	620 - LIME	699.000	TON		
0087	620 - SEEDING	349.240	ACRE		
0088	SS&620 - MULCH COVER	870.340	ACRE		
0089	620 - WATER	46,286.100	MGAL		
0090	621 - TEMPORARY SEEDING	521.100	ACRE		
0091	621 - SILT FENCE	92,745.000	LF		
0092	621 - SAND BAG DITCH CHECKS	4,400.000	BAG		
0093	621 - SEDIMENT REMOVAL AND DISPOSAL	3,762.000	CUYD		
0094	621 - ROCK DITCH CHECKS	873.000	CUYD		
0095	SS&621 - FILTER SOCK (12")	350.000	LF		
0096	623 - SECOND SEEDING APPLICATION	349.240	ACRE		
0097	624 - SOLID SODDING	2,632.000	SQYD		

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0098	626 - EROSION CONTROL MATTING (CLASS 3)	489.000	SQYD		
0099	631 - CONCRETE BARRIER WALL (MEDIAN TYPE A)	807.000	LF		
0100	SS&632 - CONCRETE ISLAND	747.000	SQYD		
0101	SS&633 - CONCRETE WALKS	2,149.000	SQYD		
0102	SPSS633 - CONCRETE WALKS (TYPE SPECIAL)	284.000	SQYD		
0103	SS&633 - HAND RAILING	512.000	LF		
0104	SS&634 - CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	6,078.000	LF		
0105	635 - ROADWAY CONSTRUCTION CONTROL	1.000	L.S.		
0106	636 - BRIDGE CONSTRUCTION CONTROL	1.000	L.S.		
0107	637 - MAILBOXES	29.000	EACH		
0108	637 - MAILBOX SUPPORTS (SINGLE)	21.000	EACH		
0109	637 - MAILBOX SUPPORTS (DOUBLE)	4.000	EACH		
0110	641 - WHEELCHAIR RAMPS (TYPE 3)	191.000	SQYD		
0111	642 - RUMBLE STRIPS IN ASPHALT SHOULDERS	22,877.000	LF		
0112	SP&701 - SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	2.000	EACH		
0113	SP - PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED	1.000	L.S.		
0114	SP - ANTENNA SUPPORT (SHOE BASE, 50' HT.)	1.000	EACH		
0115	SP - LOCAL RADIO WITH ANTENNA	1.000	EACH		
0116	SP - LOCAL RADIO WITH ANTENNA RELOCATION	1.000	EACH		
0117	SP - ANTENNA CABLE (TYPE 6)	140.000	LF		
0118	SP&706 - TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	14.000	EACH		
0119	SP&706 - TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1.000	EACH		
0120	SP - RELOCATION OF TRAFFIC SIGNAL HEAD	4.000	EACH		
0121	SP&707 - COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	6.000	EACH		
0122	708 - TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	3,089.000	LF		
0123	708 - TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	77.000	LF		

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0124	708 - TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	397.000	LF		
0125	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	883.000	LF		
0126	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	175.000	LF		
0127	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	45.000	LF		
0128	SP - ELECTRICAL CONDUCTORS FOR LUMINAIRES	698.000	LF		
0129	709 - GALVANIZED STEEL CONDUIT (2")	80.000	LF		
0130	709 - GALVANIZED STEEL CONDUIT (3")	70.000	LF		
0131	710 - NON-METALLIC CONDUIT (2")	120.000	LF		
0132	710 - NON-METALLIC CONDUIT (3")	566.000	LF		
0133	711 - CONCRETE PULL BOX (TYPE 2)	1.000	EACH		
0134	711 - CONCRETE PULL BOX (TYPE 1 HD)	1.000	EACH		
0135	711 - CONCRETE PULL BOX (TYPE 2 HD)	6.000	EACH		
0136	SS&713 - SPAN WIRE ASSEMBLY	1.000	EACH		
0137	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	1.000	EACH		
0138	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1.000	EACH		
0139	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32'-22')	1.000	EACH		
0140	SP - LED LUMINAIRE ASSEMBLY	3.000	EACH		
0141	SS&715 - TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4.000	EACH		
0142	SP - SERVICE POINT ASSEMBLY (2 CIRCUITS)	1.000	EACH		
0143	SP - REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.000	L.S.		
0144	716 - TREATED WOOD POLE (CLASS 2, 45')	4.000	EACH		
0145	718 - REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	5,806.000	LF		
0146	718 - REFLECTORIZED PAINT PAVEMENT MARKING WHITE (12")	498.000	LF		
0147	718 - REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	5,739.000	LF		

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0148	719 - THERMOPLASTIC PAVEMENT MARKING WHITE (6")	24,238.000	LF		
0149	719 - THERMOPLASTIC PAVEMENT MARKING WHITE (12")	1,016.000	LF		
0150	719 - THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	34,792.000	LF		
0151	719 - THERMOPLASTIC PAVEMENT MARKING YELLOW (12")	1,361.000	LF		
0152	719 - THERMOPLASTIC PAVEMENT MARKING (WORDS)	12.000	EACH		
0153	719 - THERMOPLASTIC PAVEMENT MARKING (ARROWS)	26.000	EACH		
0154	SP&719 - THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	92.000	LF		
0155	SP - ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")	12,184.000	LF		
0156	SP - ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (12")	3,509.000	LF		
0157	SP - ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	3,109.000	LF		
0158	721 - RAISED PAVEMENT MARKERS (TYPE II)	780.000	EACH		
0159	SP - RELOCATION OF EXISTING OVERHEAD SIGN STRUCTURE (OH-040-23-20)	1.000	EACH		
0160	SS&725 - GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	112.000	SQFT		
0161	SS&725 - GUIDE SIGN-OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)	284.000	SQFT		
0162	SPSS726 - STANDARD SIGN	1,143.000	SQFT		
0163	SS&727 - EXIT NUMBER PANEL (TYPE A)	24.000	SQFT		
0164	SP - OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	41.000	EACH		
0165	SP - OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	23.000	EACH		
0166	SP - OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	8.000	EACH		
0167	SP - OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)	6.000	EACH		
0168	SP - OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-4)	3.000	EACH		

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0169	SP - OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-5)	3.000	EACH		
0170	SS&731 - TEMPORARY IMPACT ATTENUATION BARRIER	3.000	EACH		
0171	SS&731 - TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	3.000	EACH		
0172	SP - VIDEO DETECTOR ROTATION	2.000	EACH		
0173	SP&733 - VIDEO DETECTOR (CLR)	10.000	EACH		
0174	733 - VIDEO CABLE	2,050.000	LF		
0175	733 - VIDEO MONITOR (CLR)	2.000	EACH		
0176	SP&733 - VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	7.000	EACH		
0177	SP&733 - VEHICLE DETECTOR RACK (16 CHANNEL)	2.000	EACH		
0178	801 - UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	187.000	CUYD		
0179	801 - UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	155.000	CUYD		
0180	SS&802 - CLASS S CONCRETE-ROADWAY	312.020	CUYD		
0181	SS&802 - CLASS S CONCRETE-BRIDGE	870.700	CUYD		
0182	SPSS802 - CLASS S(AE) CONCRETE-BRIDGE	1,466.200	CUYD		
0183	SP - RETAINING WALL	12,616.000	SQFT		
0184	SP - ARCHITECTURAL FINISH	5,342.000	SQFT		
0185	SP - TEXTURED COATING FINISH	2,757.000	SQYD		
0186	803 - CLASS 1 PROTECTIVE SURFACE TREATMENT	109.300	GAL		
0187	SS&804 - REINFORCING STEEL-ROADWAY (GRADE 60)	119,800.000	LB		
0188	SS&804 - REINFORCING STEEL-BRIDGE (GRADE 60)	130,290.000	LB		
0189	SS&804 - EPOXY COATED REINFORCING STEEL (GRADE 60)	299,040.000	LB		
0190	SS&805 - STEEL PILING (HP 12X53)	1,974.000	LF		
0191	SP - CORING DRILLED SHAFT	44.000	LF		
0192	SP - DRILLED SHAFT (72" DIAMETER)	220.000	LF		
0193	SP - PERMANENT STEEL CASING (84" DIAMETER)	100.000	LF		

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
0194	SS&805 - PREBORING	480.000	LF		
0195	SP - EXPLORATORY HOLES	320.000	LF		
0196	SP - CROSSHOLE SONIC LOGGING (72" DIAMETER)	10.000	EACH		
0197	806 - METAL BRIDGE RAILING (TYPE H2)	898.000	LF		
0198	SPSS807 - STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)	1,578,840.000	LB		
0199	SS&807 - PAINTING STRUCTURAL STEEL	789.400	TON		
0200	SS&808 - ELASTOMERIC BEARINGS	30,496.000	CUIN		
0201	SS&809 - SILICONE JOINT SEALANT	322.000	LF		
0202	812 - BRIDGE NAME PLATE (TYPE D)	2.000	EACH		
0203	816 - FILTER BLANKET	104.000	SQYD		
0204	816 - DUMPED RIPRAP	56.000	CUYD		
0205	816 - CONCRETE RIPRAP	62.000	CUYD		
0206	SP - ANIMAL PASSAGE SHELVES	36.000	LF		
0207	SP - ANIMAL PASSAGE RAMPS	240.000	LF		

Section 01 Total: _____

Section 02 - 18" PIPE CULVERTS (CLASS IV) ALTERNATE - BID ONE ITEM ONLY

0208 A0 - 1	606 - 18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	34.000	LF		
0209 A0 - 2	606 - 18" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	34.000	LF		
0210 A0 - 3	606 - 18" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	34.000	LF		
0211 A0 - 4	606 - 18" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (16 GAUGE)	34.000	LF		

Section 02 Total: _____

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Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
Section 03 - 18" PIPE CULVERTS (CLASS V) ALTERNATE - BID ONE ITEM ONLY				
0212 B0 - 1	606 - 18" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	70.000 LF	_____	_____
0213 B0 - 2	606 - 18" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	70.000 LF	_____	_____
0214 B0 - 3	606 - 18" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	70.000 LF	_____	_____
0215 B0 - 4	606 - 18" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (16 GAUGE)	70.000 LF	_____	_____
0216 B0 - 5	SP&606 - 18" HIGH DENSITY POLYETHYLENE PIPE	70.000 LF	_____	_____
0217 B0 - 6	SP&606 - 18" PVC PIPE	70.000 LF	_____	_____
			Section 03 Total:	_____
Section 04 - 24" PIPE CULVERTS (CLASS III) ALTERNATE - BID ONE ITEM ONLY				
0218 C0 - 1	606 - 24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	1,442.000 LF	_____	_____
0219 C0 - 2	606 - 24" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	1,442.000 LF	_____	_____
0220 C0 - 3	606 - 24" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	1,442.000 LF	_____	_____
0221 C0 - 4	606 - 24" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	1,442.000 LF	_____	_____
0222 C0 - 5	SP&606 - 24" HIGH DENSITY POLYETHYLENE PIPE	1,442.000 LF	_____	_____
0223 C0 - 6	SP&606 - 24" PVC PIPE	1,442.000 LF	_____	_____
			Section 04 Total:	_____

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Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
Section 05 - 24" PIPE CULVERTS (CLASS V) ALTERNATE - BID ONE ITEM ONLY				
0224 D0 - 1	SP&606 - 24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	496.000 LF	_____	_____
0225 D0 - 2	606 - 24" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	496.000 LF	_____	_____
0226 D0 - 3	606 - 24" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	496.000 LF	_____	_____
0227 D0 - 4	606 - 24" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	496.000 LF	_____	_____
0228 D0 - 5	SP&606 - 24" HIGH DENSITY POLYETHYLENE PIPE	496.000 LF	_____	_____
0229 D0 - 6	SP&606 - 24" PVC PIPE	496.000 LF	_____	_____
			Section 05 Total:	_____
Section 06 - 42" PIPE CULVERTS (CLASS III) ALTERNATE - BID ONE ITEM ONLY				
0230 E0 - 1	606 - 42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	112.000 LF	_____	_____
0231 E0 - 2	606 - 42" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)	112.000 LF	_____	_____
0232 E0 - 3	606 - 42" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)	112.000 LF	_____	_____
0233 E0 - 4	606 - 42" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (14 GAUGE)	112.000 LF	_____	_____
0234 E0 - 5	SP&606 - 42" HIGH DENSITY POLYETHYLENE PIPE	112.000 LF	_____	_____
			Section 06 Total:	_____

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Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
Section 07 - 29" X 18" ARCH PIPE CULVERTS (CLASS IV) ALTERNATE - BID ONE ITEM ONLY				
0235 F0 - 1	606 - 29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	34.000 LF	_____	_____
0236 F0 - 2	606 - 28" X 20" ASPHALT COATED CORRUGATED STEEL ARCH PIPE CULVERTS (16 GAUGE)	34.000 LF	_____	_____
0237 F0 - 3	606 - 28" X 20" ALUMINUM COATED CORRUGATED STEEL ARCH PIPE CULVERTS (16 GAUGE)	34.000 LF	_____	_____
0238 F0 - 4	606 - 28" X 20" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE CULVERT (16 GAUGE)	34.000 LF	_____	_____
			Section 07 Total:	_____
Section 08 - 18" FLARED END SECTIONS ALTERNATE - BID ONE ITEM ONLY				
0239 G0 - 1	606 - 18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	18.000 EACH	_____	_____
0240 G0 - 2	606 - 18" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS	18.000 EACH	_____	_____
			Section 08 Total:	_____
Section 09 - 24" FLARED END SECTIONS ALTERNATE - BID ONE ITEM ONLY				
0241 H0 - 1	606 - 24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	34.000 EACH	_____	_____
0242 H0 - 2	606 - 24" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS	34.000 EACH	_____	_____
			Section 09 Total:	_____
Section 10 - 4' CHAIN LINK FENCE ALTERNATE - BID ONE ITEM ONLY				
0243 I0 - 1	619 - 4' STEEL CHAIN LINK FENCE	151.000 LF	_____	_____
0244 I0 - 2	619 - 4' ALUMINUM CHAIN LINK FENCE	151.000 LF	_____	_____
			Section 10 Total:	_____

Arkansas Department of Transportation
Schedule of Items

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Line Number	Item Code and Description	Estimated Quantity		Unit Bid Price	Price Extension
Section 11 - 5' CHAIN LINK FENCE ALTERNATE - BID ONE ITEM ONLY					
0245 J0 - 1	619 - 5' STEEL CHAIN LINK FENCE	229.000	LF	_____	_____
0246 J0 - 2	619 - 5' ALUMINUM CHAIN LINK FENCE	229.000	LF	_____	_____
				Section 11 Total:	_____
Section 12 - 16' GATES ALTERNATE - BID ONE ITEM ONLY					
0247 K0 - 1	619 - 16' STEEL GATES	2.000	EACH	_____	_____
0248 K0 - 2	619 - 16' ALUMINUM GATES	2.000	EACH	_____	_____
				Section 12 Total:	_____
				Subtotal:	_____
0249	601 - MOBILIZATION (UNIT BID AMOUNT MAY NOT EXCEED 5% OF SUBTOTAL)	1.000	L.S.	_____	_____
				Bid Total:	_____

This job requires A+C method bidding. Bidder must show total number of Calendar Days to substantially complete the specified site use work (C).

_____ Days X $4,500/Day = $_____ (C)

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

ANTI-COLLUSION AND DEBARMENT CERTIFICATION

FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.

As a condition precedent to the acceptance of the bidding document for this project, the bidder shall file this Affidavit executed by, or on behalf of the person, firm, association, or corporation submitting the bid. The original of this Affidavit shall be filed with the Arkansas Department of Transportation **at the time proposals are submitted**.

A F F I D A V I T

I hereby certify, under penalty of perjury under the laws of the United States and/or the State of Arkansas, that the bidder listed below has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid for this project, is not presently barred from bidding in any other jurisdiction as a result of any collusion or any other action in restraint of free competition, and that the foregoing is true and correct.

Further, that except as noted below, the bidder, or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federal funds:

a. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State, or Local agency;

b. has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State, or Local agency within the past 3 years;

c. does not have a proposed debarment pending; and

d. has not been indicted, convicted, or had an adverse civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

ANTI-COLLUSION AND DEBARMENT CERTIFICATION

FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.

EXCEPTIONS:

APPLIED TO	INITIATING AGENCY	DATES OF ACTION

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

Job No. _____ _____
(Name of Bidder)

F.A.P. No. _____ _____
(Signature)

_____ _____
(Date Executed) (Title of Person Signing)

The following Notary Public certification is **OPTIONAL** and may or may not be completed at the contractor's discretion.

State of _____)
County of _____)ss.

_____, being duly sworn, deposes and says that he is

_____ of _____
(Title) (Name of Bidder)

and that the above statements are true and correct.

Subscribed and Sworn to before me this _____ day of _____, 20_____.
My commission expires: _____.

_____
(Notary Public)

(NOTARY SEAL)

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

RESTRICTION OF BOYCOTT OF ISRAEL CERTIFICATION

Pursuant to Arkansas Code Annotated § 25-1-503, a public entity **shall not** enter into a contract valued at $1,000 or greater with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel.

By signing below, the Contractor agrees and certifies that they do not boycott Israel and will not boycott Israel during the remaining aggregate term of the contract.

If a company does boycott Israel, see Arkansas Code Annotated § 25-1-503.

Bid Number/Contract Number	
Description of product or service	
Contractor name	

Contractor Signature: _____ Date: _____

7/26/96
Rev. 12/08/14
Rev. 11/17/17

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective contractor certifies, by signing and submitting this proposal, to the best of his or her knowledge and belief that:

1. No Federal appropriated funds have been paid or will be paid, by or on his or her behalf, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a member of Congress, an officer or employee of Congress, or any employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal-Aid contract, the prospective contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions. (Available from Arkansas Department of Transportation, Program Management Division.)

This Certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. This Certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 3 1, U.S. Code.

During the period of performance of the contract, the contractor and all lower tier subcontractors must file a Form-LLL at the end of each calendar year quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any previously filed disclosure form. Any person who fails to file the required Certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each failure.

The prospective contractor also agrees by submitting his or her proposal that he or she shall require that the language of this Certification be included in all lower tier subcontracts which exceed $100,000 and that all such subcontractors shall certify and disclose accordingly.

7/26/96
Rev. 11/17/17

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

C E R T I F I C A T I O N

THIS CERTIFICATION SHALL BE COMPLETED BY THE BIDDER AS PART OF THIS PROPOSAL

The bidder ____, proposed subcontractor ____, hereby certifies that he has ____, has not ____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has ____, has not ____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Currently, Standard Form 100 [EEO-1] is the only report required by the Executive Orders or their implementing regulations)

Job No. _____ _____
(Company)

F.A.P. No. _____ By: _____

Date _____ _____
(Title)

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

Rev. 7/12/04
Rev. 5/25/06
Rev. 7/12/07

ARKANSAS DEPARTMENT OF TRANSPORTATION
BIDDERS LIST

JOB NUMBER 080457 LETTING DATE November 4, 2020

JOB NAME UPRR OVERPASS & REALIGN. (MAYFLOWER) (S)

CONTRACTOR _____

➔ ***ENTER THE WORK CODES TO BE PERFORMED BY THE PRIME CONTRACTOR*** _____

The Department is required by 49 CFR 26.11, to create and maintain a master bidder's list of all firms attempting to participate on federally assisted projects. Therefore, the Contractor should provide the names and addresses of all subcontractors, truckers or material suppliers that bid or provided quotes on any item on the project, regardless of whether or not the quotes were used in preparing the proposal. DBE contractors should be indicated by placing an X in the box preceding the firm's name. The general type of work to be performed, i.e., (01) removal and disposal items (including clearing and grubbing), (02) earthwork (including drainage items), (03) hauling, (04) paving (PCCP or ACHM), (05) miscellaneous concrete, (06) traffic control, (07) erosion control, (08) signals/electrical, (09) structures (includes steel suppliers), (10) material (aggregate) supplier (11) miscellaneous *items should be shown*.

DBE	FIRM NAME ADDRESS	TYPE OF WORK (Enter Code)

Rev. 11-29-99
Rev. 1-14-15
Rev. 12-13-16
Rev. 11-07-19

ARKANSAS DEPARTMENT OF TRANSPORTATION

CERTIFICATION TO SUBMIT DBE PARTICIPATION

JOB 080457

FAILURE TO COMPLY WITH ONE OF THE FOLLOWING SHALL RENDER THIS BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION

(1) SUBMITTAL OF REQUIRED DBE PARTICIPATION INFORMATION,
(2) SUBMITTAL OF DOCUMENTATION OF GOOD FAITH EFFORTS, OR
(3) SUBMITTAL OF THE CERTIFICATION TO SUBMIT DBE PARTICIPATION

By submitting an internet proposal, the bidder irrevocably certifies that an amount equal to or greater than the Disadvantaged Business Enterprise (DBE) Goal established for this project will be performed by certified Disadvantaged Business Enterprise firms and the required DBE participation information will be submitted within 5 calendar days of the date of the bid opening.

Within five (5) calendar days of the date of the bid letting, all bidders shall furnish the required DBE Participation information to the Department on the forms provided to be considered a responsive bid. If a conditional award has been made and the successful bidder has not furnished the required information, the proposal will be rejected and their proposal guaranty forfeited. The proposal guaranty shall become property of the Commission, not as a penalty, but in liquidation of damages, sustained to the DBE Program. Award may then be made to the next lowest, responsive bidder or the work may be re-advertised as the Commission may decide.

Only work, materials, or services that will actually be provided by DBE firms will be credited toward the goal. The DBE firm's certification must be fully in effect at the letting date.

As an alternative, documentation of Good Faith Efforts to meet the DBE goal may be submitted to the Program Management Division prior to the deadline for proposals to be received.

Rev. 11-29-99
Rev. 1-14-15
Rev. 12-13-16

ARKANSAS DEPARTMENT OF TRANSPORTATION

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

JOB 080457

NOTE: PROPOSED PARTICIPATION BY DBEs MAY BE SHOWN BELOW AND SUBMITTED WITH BIDDER'S PROPOSAL, OR THE REQUIRED INFORMATION MAY BE SUBMITTED IN KEEPING WITH THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS "GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION" AND "DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES".

As provided in the Special Provision "Goals for Disadvantaged Business Enterprise Participation", the undersigned bidder proposes to use the certified DISADVANTAGED BUSINESS ENTERPRISE (DBE) subcontractors listed below to meet the goal of **9.0%** of the total contract by DBEs. Only work or services that will actually be provided by the DBE firm(s) should be shown.

NAME & ADDRESS	LINE #	ITEM DESCRIPTION	AMOUNT
			$

If any firm listed above is a regular dealer, but not a manufacturer, the total amount of the agreement and the amount to be credited (60%) should be recorded on this form.

Total for DBEs - $ _____ or _____ % of bid.

_____ By: _____
(Contractor)

Title: _____

The named DBE subcontractors confirm their participation in the contract as provided in the commitment.

DBE Firm: DBE Owner or Authorized Representative's Signature:

1. _____ _____
2. _____ _____
3. _____ _____
4. _____ _____

ARKANSAS DEPARTMENT OF TRANSPORTATION

CERTIFICATION STATEMENT

JOB 080457

Contractor's Certification Statement for National Pollutant Discharge Elimination System (NPDES) Construction Storm Water Permit Number ARR150000.

All Contractors operating on the site shall have the responsibility for compliance with Section 110 of the Standard Specifications for their operations, including, but not limited to: Good housekeeping practices, spill prevention, spill reporting and clean-up, and product specific practices such as limiting the discharge of concrete waste water to areas specified in the SWPPP.

Contractor Printed Name:_____

Signature: _____ **Title:** _____

Company Name: _____ **Date:** _____

Company Address: _____

Telephone No.: _____ **ARDOT Job Number:** _____